An Inaugural Address
ON
THE UNDIMINISHED MORTALITY FROM PUERPERAL FEVER IN ENGLAND AND WALES.

Delivered efore the Obstetrical Society of London on March 3rd, 1897,

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GENTLEMEN,—Notwithstanding the risk of repeating what every newly elected President has said before when rising for the first time to address those to whom he owes his distinction, I cannot let such an opportunity pass without expressing my sense of the honour you have conferred upon me in calling me to occupy this responsible position. It is no mere empty form of words when I say that I enter on my duties with diffidence and a keen sense of the responsibilities I am undertaking. I sincerely trust that my term of office may be one of prosperity and peace, and I think there is every probability that it will be. But whether it should be my good fortune, whilst in command of the vessel, to have prosperous winds and a calm sea, or whether it be otherwise, you may rely on my doing my utmost to follow the best traditions of the society, to uphold its dignity and interests, and to help it to fulfil the great objects for which it was founded and which it has hitherto so faithfully and successfully carried out. I have sometimes thought that the society suffers from a plethora of presidential addresses. It is the custom for every President to deliver three addresses during his two years' tenure of office—viz., an inaugural address, a valedictory address, and a sort of interim report at the close of his first year of office. One consequence of this arrangement is that every second year it happens, as on this occasion, that the time of the society is occupied at two successive meetings by an address from the chair. It is conceivable that such an arrangement might come to be a serious interruption to the ordinary business of the society, though at present the list of communications in the hands of the secretaries is not a long one.

Perhaps the most usual conception of the function of an inaugural address is that it should embrace a survey of recent progress. My own notion is that it should be regarded as an opportunity to give utterance to thoughts, bearing on the society's objects and work, that have been occupying the speaker's own mind and that are of too general a nature to form the subject of an ordinary communication. Retrospects of the kind just alluded to undoubtedly have their uses, but, besides their tendency to become monotonous, they have to my mind this additional drawback—that they concentrate our attention too exclusively upon the bright side of the picture and miss the lessons to be learnt from our disappointments and failures. Presidents of scientific societies are not singular in this habit of recording successes, and ignoring or passing lightly over the failures. It is the tendency of human nature in general, and presidents of scientific societies, notwithstanding all the dicta of Miss Cobbe and her coterie to the contrary, are very human.

I cannot help thinking, however, that it must be a good thing to have our attention called, at least once now and then, to the darker and more disheartening aspect of affairs, to be brought face to face with the actual facts of the situation, so that, recognising our errors, we may endeavour to repair them, and, having our weak places pointed out, we may set to work to strengthen them, and that we may be stimulated to gird ourselves with new and more serviceable weapons for the struggle in which we are severally engaged. In our own profession it has passed almost into a proverb that there is often more to be learnt from a record of failure than from a story of success. It is from a strong conviction of the truth of this that I have decided to utilise this occasion for the purpose of drawing the attention of the profession to the death-rate from puerperal fever in this country, and to the humiliating fact that, notwithstanding the introduction of antiseptics, the almost complete banishment of the disease from our lying-in hospitals, and the general advance in our obstetrical knowledge, the death-rate has not only not diminished, but in some districts has actually increased during the past few years. Attention has already been called to this fact by others, especially by Dr. Boxall[1] and by Dr. Williams of Cardiff,[2] to whose valuable papers I am indebted for much of the information I am about to bring before you. But there seems good reason to think that the profession has not as yet realised the enormous importance and significance of the facts to which these writers have invited attention, and has not by any means laid to heart the lessons to be learnt from them or the urgent necessity that exists for a radical alteration in our present midwifery practice. It appears to me that at the present moment there is no obstetrical or gynæcological subject that can compare in importance with this question of the undiminished death-rate from puerperal fever.

Three or four years ago Dr. Boxall was appealed to by a physician to one of the insurance companies for facts bearing on the alleged diminution in the mortality of childbirth. The directors of the company were considering how far they would be justified in relaxing the rule by which 1 per cent. had hitherto been added to the insurance premium in the case of women expecting their first confinement. The result of the inquiry instituted by Dr. Boxall, in response to this appeal, proved startling even to himself. It was well known that the mortality from puerperal fever had during the past few years diminished almost to the vanishing point in the lying-in hospitals, and the knowledge of this fact had led to the impression that the general mortality from puerperal fever had diminished. Indeed, it had so far come to be taken for granted that speakers and writers on the subject repeatedly referred to this alleged diminution as a matter of common knowledge and as an occasion for legitimate jubilation. When the returns of the Registrar-General came to be examined, however, it was found that this rejoicing had been premature. The figures showed that, so far from having diminished, the death-rate from puerperal fever in England and Wales had considerably increased. The mortality returns of the Registrar-General are arranged under two headings—viz, (1) puerperal fever or metria, and (2) accidents of childbirth. The latter includes cases fatal from hæmorrhage, eclampsia, puerperal mania, pulmonary embolism, &c. Deaths occurring during childbed from pre-existing disease or from causes not directly connected with childbirth, though taking place during labour or during the lying-in period, are left out of account. The returns under the two headings mentioned, therefore, comprise all the deaths known to have occurred *from* childbirth, though not all that occurred *in* childbirth. I am not concerned on this occasion with the mortality from the accidents of childbirth, though I may have to allude to them incidentally. My purpose is to call attention to the deaths from puerperal fever.

In the accompanying table is shown in detail the actual

TABLE I.—*Showing Mortality from Puerperal Fever in England and Wales from 1847 to 1895.*

Year.	No. of deaths.	Per 1000 births.	Year.	No. of deaths.	Per 1000 births.	Year.	No. of deaths.	Per 1000 births.
1847 ...	784	1·5	1864 ...	1484	2·0	1881 ...	2287	2·6
1848 ...	1365	2·4	1865 ...	1333	1·8	1882 ...	2564	2·9
1849 ...	1165	2·0	1866 ...	1197	1·5	1883 ...	2616	2·9
1850 ...	1113	1·9	1867 ...	1066	1·4	1884 ...	2468	2·7
1851 ...	1009	1·6	1868 ...	1196	1·5	1885 ...	2420	2·7
1852 ...	972	1·6	1869 ...	1181	1·5	1886 ...	2078	2·3
1853 ...	795	1·3	1870 ...	1492	1·9	1887 ...	2450	2·8
1854 ...	954	1·7	1871 ...	1464	1·8	1888 ...	2386	2·7
1855 ...	1079	1·7	1872 ...	1400	1·7	1889 ...	1852	2·1
1856 ...	1067	1·6	1873 ...	1740	2·1	1890 ...	1956	2·2
1857 ...	836	1·3	1874 ...	3108	3·6	1891 ...	1973	2·2
1858 ...	1038	1·6	1875 ...	2504	2·9	1892 ...	2356	2·6
1859 ...	1238	1·8	1876 ...	1746	2·0	1893 ...	3023	3·3
1860 ...	987	1·4	1877 ...	1444	1·6	1894 ...	2167	2·4
1861 ...	886	1·3	1878 ...	1415	1·6	1895 ...	1843	2·0
1862 ...	940	1·3	1879 ...	1464	1·7	—	—	—
1863 ...	1155	1·6	1880 ...	1659	1·9	—	—	—

[1] The Mortality of Childbirth, THE LANCET, July 1st, 1893.
[2] Puerperal Mortality, Transactions of the Epidemiological Society, March, 1896.

number of deaths returned annually under that head from the year 1847 to 1895 inclusive, together with the death-rate estimated in relation to the number of registered births—that is, to the number of children born alive.

It will be seen that in 1881 there was a rise both in the actual number of deaths and in the percentage. It is quite true that the figures of that year had been exceeded on two occasions previously—viz., in 1874 and 1875; but after those two years the figures fell again, whereas since 1881 the increase has been maintained. It is this which gives significance to the rise in 1881. It should, however, be mentioned that in that year, with a view to making the returns more complete, the Registrar-General, in certain cases in which the certificates of death were not satisfactorily filled up, wrote to the medical men who had signed them for further particulars. Thus a letter was sent in every case in which a woman of child-bearing age was stated to have died from either peritonitis, septicæmia, or pyæmia. As a result of these special inquiries, which have been continued to the present time, numerous deaths have been added under the heading of puerperal fever. I am perfectly willing to make full allowance for this and to concede that the sustained increase in the mortality from puerperal fever during the last fifteen years is to be partly accounted for in this way. But when all this has been granted we are still face to face with the fact that the mortality has not appreciably diminished during the past fifteen years, and that the year 1893 was conspicuous for a puerperal fever mortality only once exceeded since 1847, the year in which the Registrar-General first issued a separate return. It is not pretended that the Registrar-General's returns give the figures with absolute correctness. No system that depends upon the accuracy of statement of a large number of people ever can be perfect. Besides which, as I have elsewhere pointed out, there is a natural tendency on the part of medical men, partly on personal and partly on public grounds, to avoid attributing deaths directly to the effect of childbirth. If, however, the figures err, they err in the direction of being *below* the truth, not *in excess* of it. Moreover, the sources of fallacy are not limited to a single year; they are the same throughout a long series. Hence they do not affect the comparison of one year with another, which is what I am now chiefly concerned with Indeed, there can be no doubt that, if we could obtain perfectly correct returns, they would bring out even still more strongly the point to which I am directing attention, for while the number of deaths and the percentage would both be higher the comparability of the figures of any one year with those of other years would remain unaffected.

Before proceeding to inquire into the causes of the persistently high mortality from puerperal fever it may be well to ask your attention for a few minutes to its geographical distribution. In London the total death-rate from childbirth has considerably diminished. The diminution is due, however, not to any appreciable lowering of the mortality from puerperal fever, but to a lessened mortality from the accidents of childbirth. In the provinces, on the other hand, the total death-rate from childbirth remains practically unaltered; but whilst, as in the case of London, there has been a diminution in the mortality from the accidents of childbirth, the mortality from puerperal fever has increased to such an extent that instead of being accountable for less than a third of the total mortality it is now accountable for more than one-half. In a paper read before the Epidemiological Society in March of last year (1896) Dr. Williams, the medical officer of health for the county of Glamorgan, showed that, of the various districts and counties of England and Wales, those with the heaviest death-rate from puerperal fever between the years 1848 and 1894 were Lancashire (2·4), which heads the list, North and South Wales, Northumberland, and Cheshire (2·2). Close behind them came Cumberland, Durham, the West Riding of Yorkshire, Derby, and London (2·1). Surrey had the lowest mortality, and very near to it came Cornwall, Sussex, Hants, Dorset, and Rutland (all under 1·4). Taking the shorter and more recent period embraced between the years 1885 and 1894, Lancashire, Cheshire, and North and South Wales still maintain their unenviable pre-eminence in the black list; Northumberland disappears from it; and Derbyshire and the West Riding of Yorkshire take its place. Dr. Williams points out that as a general rule the rate is "highest in the Western Counties, especially in the hilly Welsh division, or, roughly, in those counties and parts of counties west of a straight line drawn from the mouth of the Severn to that of the Tees."

It would be impossible in the limited time at my disposal this evening to enter into a detailed inquiry into the conditions of life and other circumstances which might serve to explain the relative mortality from puerperal fever in all these various districts. It must suffice if I select one district—namely, that of Wales. I make this selection because in the paper already alluded to Dr. Williams has furnished, ready to our hands, very ample materials for forming an estimate of the determining causes of the high death-rate from puerperal fever in that part of the country. After giving a table of the death-rate for each Welsh county for a period of ten years, Dr. Williams observes that density of population does not seem to be "a factor of much importance in determining puerperal mortality; on the contrary, both the mortality from puerperal fever and from accidents of childbirth display a marked tendency to prevail in those counties where the only features in common between them is that they are mountainous, hilly, and sparsely populated, and that consequently locomotion is tedious and medical assistance difficult to obtain in time. On the other hand, the mortality seems to be generally lowest in the flatter counties." He then proceeds to speak more particularly of the registration county of Glamorgan, of which, as the medical officer of health, he has an intimate knowledge. The county of Glamorgan "has an estimated population of some 800,000, over half the population of Wales. It covers 516 966 statute acres, and includes the two county boroughs of Cardiff and Swansea." The county is divided into eight registration districts, and it is instructive to follow Dr. Williams in his summary of the relative mortality from childbirth in each of these and the conditions of life that prevail in them. In the Cardiff registration district the puerperal mortality exactly corresponds with the mean for England and Wales (2·0 per 1000 births). "Its sanitary condition is satisfactory, and confinements are attended generally by the medical men and trained midwives." In the Pontypridd district the puerperal mortality is excessive (4·1). Its sanitary condition is generally unsatisfactory, and most of the confinements are "attended by untrained midwives." In the Merthyr Tydvil district the death-rate from puerperal fever is higher than in any other district in Wales—viz., 4·7 per 1000 births. The greater number of confinements are attended by midwives, of whom only a few, if any, are trained. As to its sanitary condition, although that of Merthyr itself is highly unsatisfactory, that of the other parts of the district is fair. In the next district on the list—that of Bridgend—the mean annual mortality from puerperal fever for the past ten years closely approaches that of the Merthyr Tydvil district, being 4·5 per 1000 births. This district includes one small town, a small seaside resort, four mining valleys, "and an extensive rural district with an agricultural and mining population." In the mining valleys the greater number of colliers' wives are attended by unskilled and ignorant midwives, none of whom are trained or registered. The sanitary condition of the district is in some localities exceedingly unsatisfactory. In the Neath registration district there are five towns with a population varying from 4000 to 12,000, "together with an extensive area studded with mining villages and farmhouses. In the mining valleys many confinements are attended by midwives, but in the towns only a few comparatively. The sanitary condition is fair." The death-rate from puerperal fever in this district is very variable. The mean annual rate for the ten years ending 1894 was 2·8 per 1000 births—that is, higher than that of the Cardiff district, but much below that of the other three districts already mentioned. In the Pontardawe registration district, containing three mining and tin-plate towns, skilled medical assistance can be procured at short notice. The puerperal fever mortality is low (1·6). The Swansea registration district, besides the town of Swansea, includes a scattered mining population. The sanitary condition is unsatisfactory and midwives are employed to a considerable extent. The death-rate from puerperal fever is fairly high (3·0). In the Gower registration district, which is largely agricultural, the sanitary condition is fair, but the rate of mortality from puerperal fever is high (3·8). Dr. Williams points out that as regards the towns the puerperal fever mortality is much the same as in similar towns elsewhere. In the densely populated mining valleys, on the other hand, the mortality is exceedingly high. He attributes this in a great measure to the systematic employment of unskilled and ignorant mid wives. "From my experience in Glamorgan," he says, "I can prove without a doubt that they often spread puerperal fever broadcast, and are often not interfered with." "The

conditions of life," he continues, "consequent upon the physical features of the country, especially in North Wales, often make it impossible to obtain skilled assistance in time; and if any [assistance] is to be obtained it must be from untrained midwives." Even these are not always available, for in such districts friends and neighbours are often compelled to give the help that is needed.

I have considered the case of Wales at some length because the information at our command is so definite. No one, I think, after hearing the above facts, can have any doubt as to the causes which mainly determine the excessive death-rate from puerperal fever in that country. I have not time, as I said before, to inquire at any length into the conditions of life amongst the working classes in all the districts in which the mortality from puerperal fever is excessive, but I cannot refrain from saying a word or two about Lancashire with regard to which we have some very important evidence. In the year 1892 Dr. T. E. Hayward, the medical officer of health for the district of Haydock, in Lancashire, appeared before the Select Committee on Midwives' Registration. The following is an abbreviated extract from the minutes of his evidence: "Haydock is a coal-mining district. The population is 6535; there were 272 births registered last year; the average number for the past few years is 250. ..... I am in a position to state that scarcely a fifth part of those confinements are attended at any stage by a doctor. The work is done by women who practise as midwives," but who "are, with few exceptions, untrained and in very many cases grossly ignorant and incompetent." "The same condition of things holds good more or less in the whole of that part of Lancashire." In support of that statement he quoted the report of the medical officer of health for the county borough of St. Helens, with a population of over 70,000, in which it was stated that the great majority of confinements in St. Helens "are attended by midwives, a large number of whom have no other qualification than that of being mothers themselves." It will thus be seen that, at least in one important particular, the conditions under which the death-rate from puerperal fever is excessive in Lancashire are similar to those which prevail in Wales. It must not, however, be supposed that I am going to lay the entire blame for the present deplorable loss of life from puerperal fever upon the midwives. The evidence is incontestable that they are responsible for much of it, but on this head I have probably for the present said enough. I desire now to bring the inquiry nearer home.

By the kindness of Mr. Shirley Murphy, the medical officer of health for the administrative county of London, I have been supplied with a statement of the number of cases of puerperal fever notified in the various parishes within the London sanitary district during the five years 1891–5, and also with a statement of the number of births in each parish during the same period. From these two statements I have been enabled to draw up a list showing the number of notified cases of puerperal fever to every thousand births in each of the forty-one parishes. In other words, I have constructed a table of the relative incidence of puerperal fever in the London sanitary district during 1891–5. The result, which is somewhat unexpected, has been embodied in a map of the district, prepared for me by my friend Mr. R. E. Holding. In this map the parishes where puerperal fever is most prevalent are shaded black, those in which the prevalence is a little below the highest, but still greater than in London taken as a whole, are marked by cross lines and dots, those in which the rate is less than that for the whole of London are marked by horizontal lines, while those in which the proportion of cases to the number of births is comparatively small are left white. Hampstead heads the list, for, although the actual number of cases is smaller than in many other parishes, the proportion of cases to the number of confinements (as estimated by the number of births) is the highest in London. As regards the actual number of cases Islington had by far the largest—viz., 169; next to it, though at a considerable distance, came St. Pancras with 88, Lambeth with 86, and Battersea with 84.

The parishes that figure in the black list, then, are Hampstead, Islington, Battersea, Wandsworth, and Lewisham. All these show a rate of over 3 cases per 1000 births. After them come, in the order named, Fulham, Paddington, Greenwich, St. James, Bethnal Green, St. Pancras, Hammersmith, Lee and Plumstead, Stoke Newington and Hackney, Kensington and Chelsea. The rate in all these is higher than that for London generally. It will be observed that Westminster, Lambeth, Whitechapel, St. George-in-the-East, and Shoreditch, which might have been expected to appear high up in the list, show a much smaller proportion of cases than Hampstead and Islington, and even St. James, Kensington, and Chelsea. In St. Martin-in-the-Fields not a

TABLE II.—*Showing the Relative Incidence of Cases of Puerperal Fever in the respective Parishes of the London Sanitary District from 1891 to 1895.* (*See Maps.*)

No. in maps.	Parish.	No. of notified cases per 1000 births.	No. in maps.	Parish.	No. of notified cases per 1000 births.
1	Hampstead	3·64	22	Woolwich...	1·75
2	Islington	3·48	23	St. Saviour, Southwark	1·71
3	Battersea...	3·25	24	Holborn	1·62
4	Wandsworth	3·12	25	Marylebone	1·58
5	Lewisham	3·02	26	St. George-in-the-East..	1·55
6	Fulham	2·86	27	Shoreditch	1·47
7	Paddington	2·85	28	Newington	1·45
8	Greenwich	2·77	29	Poplar	1·45
9	St. James...	2·71	30	St. George, Hanover-square	1·32
10	Bethnal Green ...	2·49	31	City of London	1·32
11	St. Pancras	2·48	32	Mile End Old Town ...	1·31
12	Hammersmith ...	2·46	33	Rotherhithe	1·32
13	Lee and Plumstead	2·41	34	Clerkenwell	1·30
14	Stoke Newington and Hackney	2·29	35	Bermondsey	1·07
15	Kensington	2·26	36	St. George, Southwark	1·02
16	Chelsea	2·23	37	St. Olave	0·93
17	Limehouse	2·14	38	St. Giles	0·89
18	Camberwell	2·09	39	Strand	0·67
19	Westminster	2·06	40	St. Luke	0·53
20	Lambeth	1·86	41	St. Martin-in-the-Fields	0·46
21	Whitechapel	1·86			

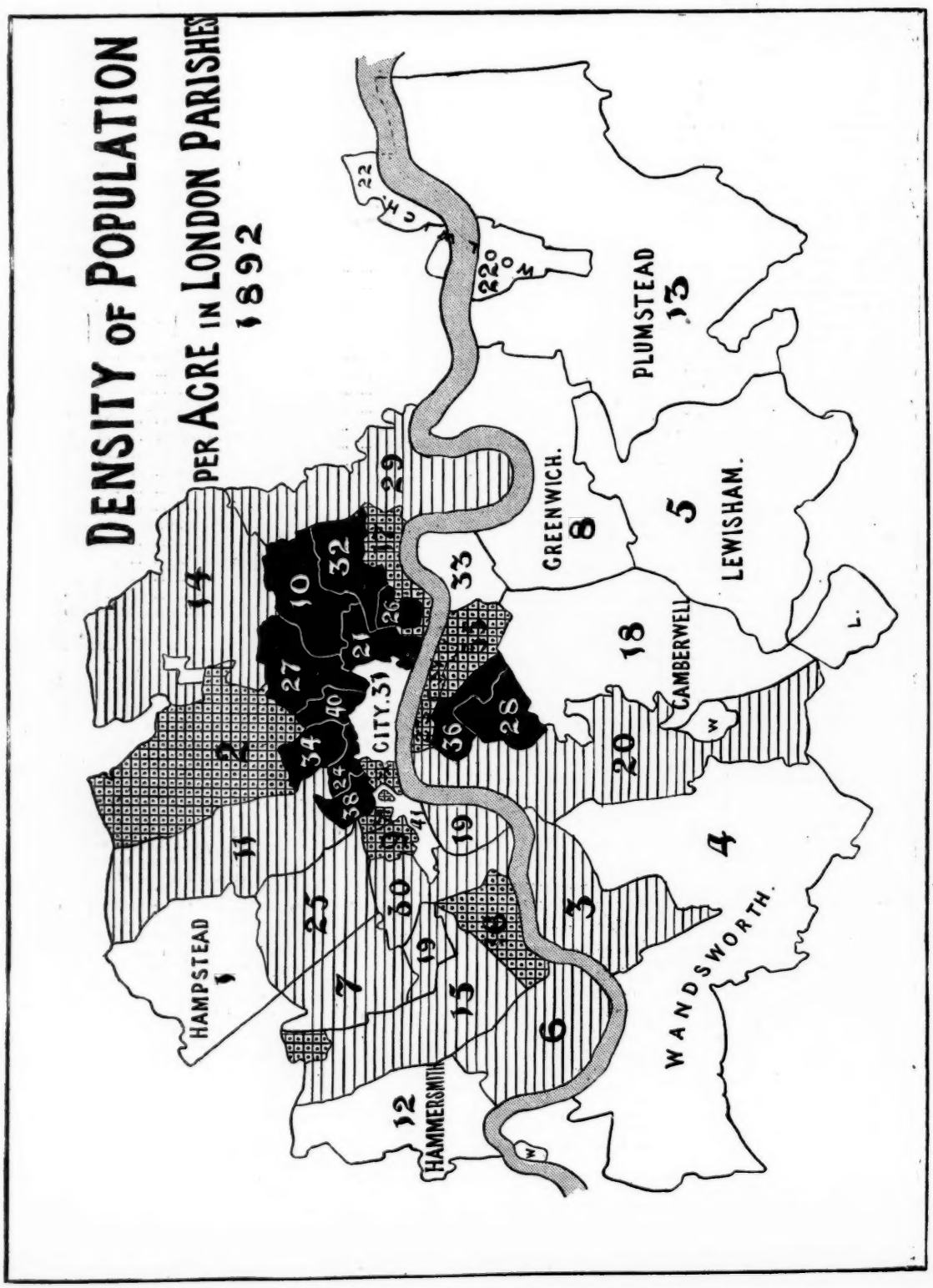
Rate for the whole sanitary district of London, 2·14.

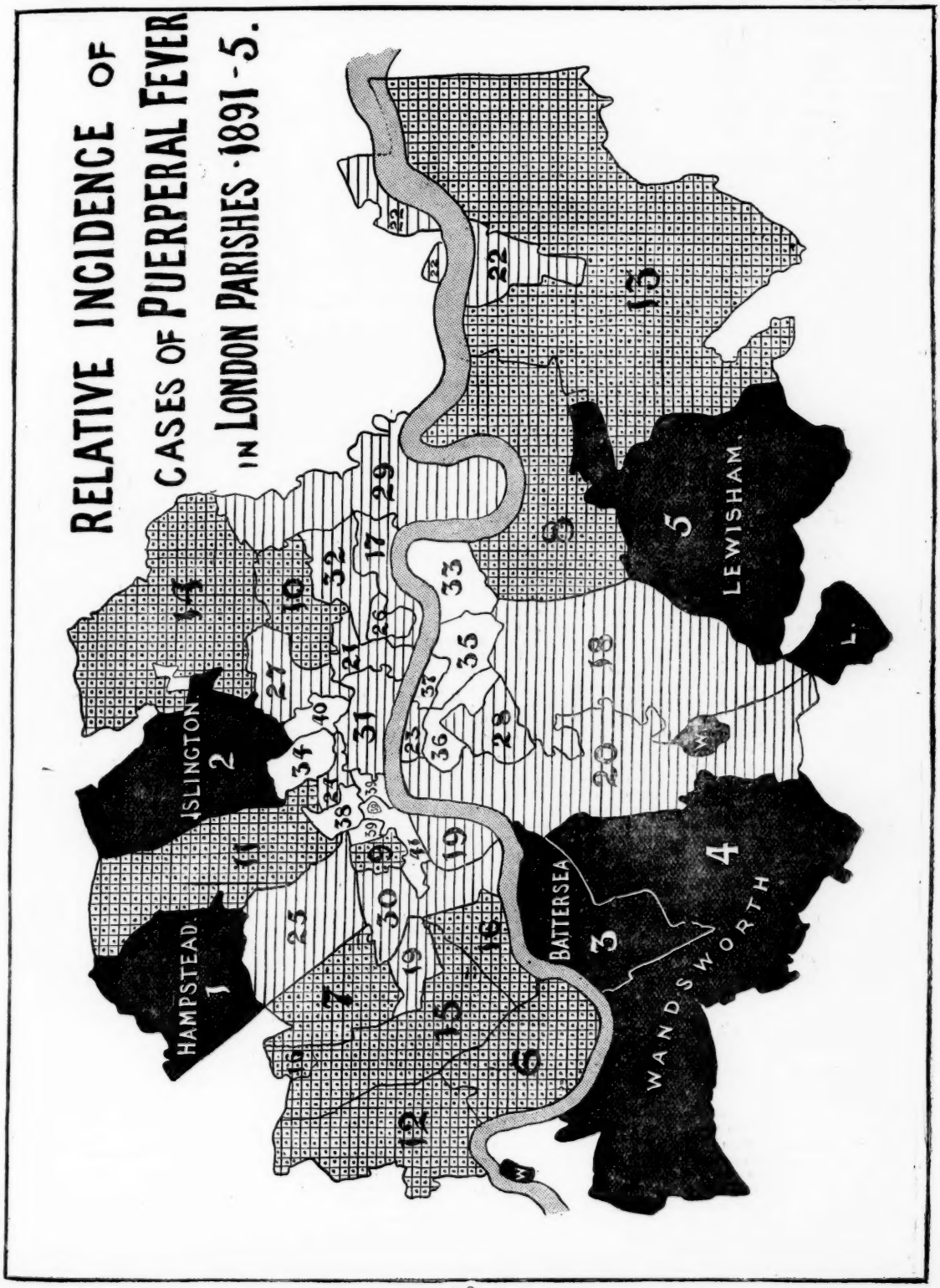
single case was notified, while Bermondsey, St. George (Southwark), St. Olave, St. Giles, Strand, and St. Luke all show a remarkably small percentage. A comparison between this map and the map on which the parishes are shaded according to the number of persons to each acre clearly shows that the prevalence of puerperal fever is not proportionate to the density of population.

The number of deaths recorded for the whole of London in the returns of the Registrar-General (1305) so nearly approximates the number of notified cases that it seems safe to infer that the cases notified were for the most part fatal, and that the result of the inquiry would not have been materially different if it had been based on the number of deaths in each parish instead of on the number of notified cases.

It is no part of my present purpose to inquire into the special conditions of the various parishes with a view to determining the causes of the greater prevalence of puerperal fever in one parish than in another. Such an inquiry would possess great interest and great value, but it would lead me too far afield this evening. I have alluded specially to the mortality in London in order to show that puerperal fever still claims its victims, not only in thinly-peopled country districts, but also in places densely populated, where, whatever the causes may be, the difficulty of obtaining medical assistance cannot be one of them. Although puerperal fever has practically become a thing of the past in our lying-in hospitals—witness the remarkable record of the General Lying-in Hospital and the equally remarkable results that Dr. Godson was able the other day to point to as having followed the introduction of antiseptics at the City of London Lying-in Hospital[3]—it is impossible to ignore the fact that there has not been a corresponding diminution of mortality from puerperal fever in ordinary private practice. It was not to be expected that those who had already been engaged for some time in practice would at once assimilate the new ideas and adopt what appeared to many of them not only new but revolutionary and unnecessary methods. But as time wore on

[3] THE LANCET, Jan. 23rd, 1897.


DENSITY OF POPULATION
PER ACRE IN LONDON PARISHES
1892
HAMPSTEAD
PLUMSTEAD
GREENWICH.
LEWISHAM.
CAMBERWELL
CITY.
HAMMERSMITH
WANDSWORTH.


RELATIVE INCIDENCE OF CASES OF PUERPERAL FEVER IN LONDON PARISHES · 1891-5.
HAMPSTEAD 1
ISLINGTON 2
BATTERSEA 3
WANDSWORTH 4
LEWISHAM 5
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E.
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and a younger race of men came upon the scene it was not unnaturally hoped that an improvement would take place, and that a mortality which had been conclusively shown to be preventable would show some signs of diminution. How is it that this hope has not been realised? Either the profession is not convinced of the possibility of stamping out puerperal fever by the methods that have been proposed or it has failed to carry out those methods with the thoroughness that can alone ensure success. As a responsible teacher of midwifery I have often asked myself the question how far the teaching is at fault. Do we teachers sufficiently impress upon the minds of our students the infinite importance of this subject? Are we ourselves careful to show by our own example the importance of the precautions that we lay down in the lecture theatre? Are we careful never to convey, by thoughtless word or careless act, the impression that the rigid adoption of antiseptic measures is excellent in theory, but does not, after all, matter so very much in practice? If we are not, is it to be wondered at that when our students go out into the world and are released from the discipline of the school and hospital they should forget how much depends on attention to minute detail, and should discharge their consciences in this matter of antiseptics by pouring a few drops of carbolic acid or a drachm of tincture of iodine into the water in which they wash their hands, or even by simply bidding the nurse administer a similarly prepared solution as a douche? I am not painting an imaginary picture. The methods at present employed by many who if questioned would be quite ready to proclaim their belief in antiseptics, and who glibly assure one they have used "every antiseptic precaution," are often so crude and imperfect as to be a ludicrous travesty of genuine antiseptic midwifery.

The questions I have just been asking I ask of myself as well as others. It is clear that something is wrong. We shall be most likely to find out what that something is by a process of self-examination, both on the part of teacher and taught, however disagreeable that process may be. A great deal has been written on the superiority of asepsis as compared with antisepsis, and it has become the fashion in some quarters to speak of antiseptics as though they had had their day and to maintain that a condition of asepsis can be attained by cleanliness alone. It is well, however, to bear in mind that the triumphs of our lying-in hospitals have all been won by the scrupulous use of antiseptics, and that sterilisation, which is the essential element in aseptic surgery, is impossible in midwifery practice. When we have thoroughly washed our hands, as we all now recognise the necessity of doing before making an examination in the lying-in room, it costs very little trouble to adopt the additional safeguard of immersing them for a few moments in an efficient antiseptic solution. And as a matter of experience those who are most diligent in the use of antiseptics are also the most diligent in carrying out all the details of elementary cleanliness. I firmly believe that if the simple antiseptic precautions with which everyone is familiar were conscientiously adopted puerperal fever would be as rare in private practice as it is now in the best lying-in hospitals. "The only way," as I have elsewhere observed, "to avoid (the present) terrible mortality, and to avoid also the terrible amount of puerperal disease, which, because it is not fatal, is apt to remain unrecorded, is for every practitioner in midwifery to recognise his personal responsibility in the matter."

In an excellent little book of advice to mothers the writer, herself a woman, after doing me the honour to quote the foregoing passage, makes the following significant comment: "Now I maintain," she says, "that *women themselves* have a *personal* responsibility in this matter also. They should not be content passively to allow their lives to lie in the hands of others who may or may not choose to use antiseptics. Women who are expecting their confinements should satisfy themselves beforehand that the doctor and the nurse engaged to attend will conscientiously use these safeguards."[4] This is plain speaking, but who will be disposed to find fault with it? It will be gathered from what I have said this evening that, in my opinion, the high death-rate from puerperal fever in this country is attributable mainly to the large number of confinements attended by ignorant and untrained midwives and to laxity and half-heartedness in the use of antiseptic precautions in private practice. The remedy for the first of these evils is to insist that women who call themselves midwives shall possess at least such an elementary knowledge of the subject as shall enable them to know how to prevent septic infection. The remedy for the second evil is thoroughness.

It is now nearly nine years since I published, in the form of an introductory address at St. Thomas's Hospital, a plea for the more general adoption of antiseptics in midwifery practice.[5] In that address I brought together as concisely as possible the evidence that had been gradually accumulated in proof of the preventability of puerperal fever, and I showed in a series of tables the magnificent results that had followed the introduction of antiseptic measures into the leading maternity hospitals of Europe and the United States. I have reason to know that the arguments I then brought forward were not without effect upon the practice of individual members of the profession. I ought perhaps to apologise for returning to-night to a subject that may seem to many to have been long ago thrashed out. The temptation was indeed great to choose some newer topic for an occasion like the present. But the more I reflected on the matter the more it was borne in upon me that it was my duty once more to raise my voice on behalf of the mothers of this country. The Obstetrical Society of London has always been foremost in the effort to reduce the present terrible mortality from childbirth. It seemed to me that I could not more suitably signalise my succession to this chair than by calling attention to the sad and disappointing fact that has formed the text of this address. If anything I have said shall have the effect of stirring the minds of my professional brethren on this subject and of diminishing to ever so slight an extent the present terrible death-rate from a disease which is now generally acknowledged, nay, proved, to be almost wholly preventable, I shall feel that I have achieved something worthy of the occasion and have done something towards justifying your choice of a president.

[4] Stacpoole, F.: Advice to Women on the Care of the Health Before, During, and After Confinement. London: Cassell and Co., 1892, p. 81.

The Erasmus Wilson Lectures

ON

THE PATHOLOGY OF THE LYMPHADENOID STRUCTURES.[1]

Delivered at the Royal College of Surgeons of England on March 1st, 3rd, and 5th, 1897,

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LECTURE I.

Delivered on March 1st.

GENTLEMEN,—The organs composed of lymphadenoid tissue are the bone marrow, the spleen, the thymus, and the glands and follicles in the mucous membrane of the alimentary and respiratory canals, but new formations may also appear in connective tissue where normally there is little sign of it. Lymphadenoid tissue is a specialised kind of white fibrous tissue in the meshwork of which free cells collect. These cells produce blood corpuscles and also retain the fundamental digestive powers of unicellular organisms. In consequence of the situations in which lymphadenoid tissue is developed waste products of tissue change are prevented from entering the circulation until they have been rendered harmless, and thus its function of protecting the body from waste products—metabolites—of normal origin is capable of extension and is thus able to offer some resistance to the spread of disease, either by counteracting the poisonous substance resulting from diseased tissues or by actually destroying the germs of disease themselves. The pathological conditions to which lymphadenoid tissue is itself subject arise in the course of the performance of the protective functions. Being excited to over action lymphadenoid

[5] THE LANCET, Oct. 6th, 1888.

[1] These lectures were illustrated by specimens from the Anatomical and Pathological Museums of the Royal College of Surgeons of England and of the Westminster Hospital.

tissue becomes the starting point of new growth, or it is replaced by scar tissue as a consequence of inflammation, so that the production of the red and white blood corpuscles is disturbed and the rest of the body thereby affected.

THE ORIGIN OF LYMPHADENOID TISSUE.

Lymphadenoid tissue is produced—(1) as lymphatic glands around the plexus of lymphatic trunks where they join in the axilla, groin, &c.; (2) around epithelial masses and glands, as the tonsils, thymus, salivary glands, and intestinal follicles; or (3) in the wall and sheath of the small blood-vessels in the spleen and bone marrow, favoured by the slow rate of the circulation. Fibrous connective tissue is changed into retiform tissue by a splitting up of its individual fibres, and into the meshwork so formed white cells emigrate from the capillary bloodvessels, and there, by multiplying, establish germinating centres. Fine capillaries permeate these germinating masses, but not so the lymphatics. The latter begin in a sinus outside the follicle, into which the young cells pass as they are pushed out from the centre by still newer formations.

Lymphadenoid tissue, like connective tissue generally, is prone to vary. An increase of the blood flow accelerates the multiplication of cells and so causes an overgrowth; a diminution in the blood-supply promotes a fatty metamorphosis, from which a renewal of lymphadenoid tissue may at any time take place—red marrow replaces the yellow, lumps of apparent fat develop again into glands, or minute glands consisting of only a single follicle can as the result of irritation become compound glands.

THE FUNCTIONS OF LYMPHADENOID TISSUE.

A.—The Formation and Destruction of Red Corpuscles.

The red corpuscle, although varying in type among vertebrates, is uniform in each species after embryonic life and during health. Its sole function is to carry oxygen, and in no other way can this action be carried out; the imperfect red corpuscles which gain access to the blood in disease appear incapable of properly doing this work. Further points of difference between it and the white corpuscle are that the red are never produced in excess, neither do they take part in new formations of any kind, nor have they any digestive powers, nor do they produce a protective secretion.

1. Red blood corpuscles are first formed from colourless cells outside the bloodvessels. They are first seen in the area vasculosa of the chick—i.e., outside the embryo itself, arising from cells of the mesoblast, previously colourless, which develop hæmoglobin in their protoplasm. There is therefore no *a priori* objection to the development at later periods also of young red cells or erythroblasts from colourless cells since the erythroblasts have in the beginning an origin in common with the young white corpuscles or leucoblasts (Neumann). On the other hand it is held that the erythroblasts of the embryo form a distinct order of cells which remain throughout life the only source of the red corpuscle (Bizzozero). The cells which form the blood islands begin to show hæmoglobin before the bloodvessel has developed around them, so that the first formation of red cells may be called extra-vascular. Later there is a very similar appearance in all the blood-forming organs, but it has not yet been settled whether the groups of erythroblasts undergoing division are placed in the lumen of the capillary or within a diverticulum of the capillary, whether they form the capillary wall itself at the point, or whether they are in the tissue outside separated from the blood stream by a layer of endothelium.

2. Red corpuscles after being formed in connective tissues are produced in later embryonic life in special organs. Erythroblasts are met with widely in the connective tissue and especially in the case of the mammalian embryo, in the walls of the umbilical vesicle, intestines, and bladder, as well as in the subcutaneous tissue (Saxer).[2] As the lymphadenoid tissues develop erythroblasts gradually disappear from the blood and only re-appear under abnormal circumstances. They also gradually disappear from the walls of the intestines and umbilical vesicle and their production becomes concentrated in the liver. The liver of the mammalian embryo takes a very important part in blood formation; it is relatively a very large organ, in the capillaries of which erythroblasts and leucoblasts are seen undergoing mitosis side by side, and according to Kostanecki[3] they have an origin in common. In late embryonic life this formation in the liver diminishes and ceases before birth. Erythroblasts are also seen during the latter part of embryonic life in the hilum and follicles of lymphatic glands, in the spleen, and in the thymus.

3. After birth the formation of red corpuscles becomes gradually confined to the red marrow in the higher mammals and man, although in lower vertebrates lymphadenoid tissue, especially the spleen, retains this function throughout life. The red marrow of birds forms a good material for demonstrating the various structures (Muir and Drummond).[4] In the capillary lumen are seen fully developed red corpuscles, in the wall are young red cells or erythroblasts which, although they project into the lumen, are fixed and show signs of mitosis; in the tissue around the capillary are the white cells rapidly dividing and passing towards the capillary channel.

On the whole it would appear most probable that the red corpuscles originate after birth from the small white cells of the marrow, and that the erythroblasts represent an intermediary stage. The alternative view is that the erythroblasts seen in the red marrow of the adult are a special class of cells directly derived from those found in the embryo.

Anæmia and regeneration of the red corpuscles.—There is an entire absence of clinical and experimental evidence as to the production of red corpuscles in excess. At any rate there is nothing comparable to leucocytosis and leucocythæmia in the case of the red corpuscle. A diminution in the rate of production of the red corpuscles seems to be the cause of the anæmia which occurs in women leading an indoor life, in those who have an insufficient supply of albuminous food, as well as in old age. And clinical experience definitely shows that the recovery up to the normal rate of production is a slow process. Anæmia can be produced experimentally in one of two ways, either by removing a considerable amount of blood or by the introduction into the circulation of some material which will increase the rate at which the red corpuscles are destroyed.

The regeneration of the blood after loss is seen when a considerable amount of blood has been taken from an animal by repeated venesections; the marrow then exhibits an increased mitosis both of colourless and coloured cells and becomes more red, the spleen swells up and erythroblasts showing mitosis are found within it, and similar immature nucleated red corpuscles are seen free in the blood stream (Freiberg[5] also Autokonenko[6]). According to Grünberg[7] erythroblasts are also to be seen in lymph glands, the intestinal follicles and tonsils, more especially when the spleen had been removed before the venesections were made. The lymph glands most affected were those of the mesentery, axilla, groin, and neck, which appeared to the naked eye enlarged and reddened. The lymphatics leading from the enlarged glands were filled with true red corpuscles, nucleated ones, and white cells. The germinating follicles of the lymph glands were exceedingly rich in leucoblasts undergoing mitosis. He speaks of the erythroblasts and red corpuscles as being in the lymphatic gland sinus, but only of leucoblasts within the stroma of the gland itself—under the foregoing condition no erythroblasts and red corpuscles were seen in the thymus (Braunschweig[8]). Venesection appears therefore to excite the leucoblasts to more rapid production, and there is a return to the embryonic state as regards the production of the red corpuscles. The alternative explanation of the appearances seen after great loss of blood is that the production of erythroblasts in the marrow is stimulated and that some are detached and carried to the spleen and lymph glands, where they continue to divide until the loss is restored, when the formation of red cells is again confined to the red marrow (Zenoni[9]; also Disse[10]).

Destruction of red cells in connexion with the spleen and also in the liver is attended by an increased production of leucocytes, and it is the increased production of these cells which appears to be the cause of the hæmolysis. According

[2] Saxer: Centralblatt für Allgemeine Patholo und Pathologische Anatomie, 1896, vol. vii., p. 421.

[3] Vide Kostanecki: Anatomische Hefte, 1892, Band i.

[4] Muir and Drummond: Journal of Anatomy and Physiology, 1894, vol. xxviii., p. 125.

[5] Freiberg: Inaugural Dissertation, Dorpat, 1892. Centralblatt für Pathologie, &c., 1893, Band iv., S. 460.

[6] Autokonenko: Archives des Sciences Biologiques, 1893, vol. ii., p. 516.

[7] Grünberg: Dissertation, Dorpat, 1891; quoted by Disse, vide infra.

[8] Braunschweig: Ibid.

[9] Zenoni: Virchow's Archiv, 1895, Band cxxxix., p. 185.

[10] Disse: Ergebnisse der Anatomie und Entwickelungsgeschichte von Merkel und Bonnet, 1895, Band v., s. 30.

to Hunter an increased destruction of red cells takes place during digestion in the spleen at a time when there is an increased production of leucocytes by that organ and by the gastro-intestinal wall. Hæmolysis in a greater degree can be brought about by acting either directly upon the blood or indirectly through the spleen and gastro-intestinal lymphadenoid tissue by injecting such a drug as toluylendiamin. The spleen enlarges several fold owing to engorgement with venous blood, iron containing pigments collect in the spleen and liver, and there is an increased secretion of bile, some of which may be absorbed and produce jaundice. Red corpuscles in various stages of degeneration are to be seen in the spleen. When, however, the spleen is first of all removed much larger doses of the drug are required to produce the hæmolysis which then takes place through the lymphadenoid tissue of the intestinal wall. The toluylendiamin at the same time markedly increases the number of white cells in the blood, and the explanation of its action is that it first excites leucocytosis, especially in the spleen, but also in the intestinal wall, and that it is the leucocytosis which is the cause of the hæmolysis. When drugs are injected which destroy the blood directly the removal of the spleen causes no alteration in the result (Hunter).[11] The anæmia, therefore, which is seen in the diseases of the lymphadenoid structures appears to originate in an excessive production of white cells, which hurry on and push out into the circulation whilst immature the red corpuscles in such a state that they cannot act fully as normal oxygen carriers and are liable to be destroyed.

B. *The White Blood Corpuscles.*

Leucocytes are all alike throughout the vertebrata, although in many species they can be divided into several kinds. They seem to be distinct from the fixed cells of the tissues, but this point is by no means definitely settled. White blood corpuscles, small marrow cells, the wandering cells, the lymphocytes as well as the free cells in the mouth, intestines, and bronchi, all originate from the cells in the meshes of lymphadenoid tissue. They are practically protozoa which can be kept alive outside the body and so be studied under the microscope. In the course of lymphadenoid disease the leucocytes, except for a temporary occasional diminution to a slight degree, are increased, sometimes, indeed, ten or twenty times, due to the abnormal excitation of lymphadenoid tissue.

1. In whatever situation these cells are found they exert a protective function due either to their secretion or to their ingesting and digesting powers. In the course of normal digestion an excess of leucocytes appears in the blood, and at the same time there is a marked enlargement of the spleen from which the cells are derived. This normal leucocytosis seems to have as its object the removal of some harmful products of digestion. In a less regular way some leucocytosis may occur during pregnancy and in the newborn infant.

2. Leucocytes play an active part in the removal of embryonic structures. Metchnikoff has described the removal by this means of the tadpole's tail, and Kowalewski that of the organs of the larva to make way for those of the imago. The epithelial structure of which the thymus is at first composed disappears before the invasion of the lymphadenoid tissue.

3. Free leucocytes in the mouth derived from the tonsils, in the intestine from the solitary and agminated follicles, and also similar cells in the bronchi, all have a deterrent action upon the growth of micro-organisms in these cavities.

4. As to inflammatory reaction, upon the inoculation of disease germs into an animal capable of offering a resistance to their attack, a local inflammatory reaction takes place, consisting of an increased circulation, but more especially of a rapid collection of leucocytes, and by multiplying rapidly these cells and their secretion may prevent the spread of the disease. If the organisms succeed in developing, the lymphadenoid tissues placed on the line of the lymphatics running from the site of inoculation may present a second line of defence against the invasion of the body. There is an increased circulation through the gland and rapid mitosis, so that more cells are produced, the gland appearing swollen and redder than usual. In it bacilli such as those of tubercle may lodge and be there digested. If, however, the bacilli gain the circulation they may be destroyed in one of two ways. They may be destroyed in the blood stream, an increased production of leucocytes being excited in all the lymphadenoid organs by the destruction of cells, or the organism may lodge in the spleen, as in anthrax and relapsing fever, and be there included by the splenic cells. If the animal, however, presents no great resistance, the micro-organisms quickly develop, whilst but few leucocytes gather round them. Even if they are checked for a time at the lymphatic glands, the organism succeeds in growing through and gains the circulation, which before death contains numbers free in the plasma, not included either in the white blood corpuscles or in the spleen cells.

The destruction of diseased germs may be due either to the cell ingesting them whilst still alive or by the secretions or products of the cell killing the organisms, and after they are dead the white cells swallow and digest them. It is generally agreed that white cells swallow and digest dead bacilli in the same way that unicellular organisms take in their food, a vesicle containing a peptic secretion is developed, the food material is dissolved, and the débris evacuated. But there has been much opposition to Metchnikoff's view that bacilli are ingested alive.

Wooldridge was the first to show that the secretions and cell products of lymphadenoid tissue can hinder or prevent the development of micro-organisms. In some experiments which I had the opportunity of watching he demonstrated that rabbits could be made immune to the inoculation of anthrax bacilli by injecting material derived from the thymus gland. Hankin and others have since then developed the large subject connected with the defensive proteids or alexins which are formed in connexion with the white cells. One method of experiment to show the power of the fluids in a resisting animal is to wrap the bacteria up so that no cells can come in contact with them, and in this way the most resisting anthrax spores may be destroyed. According to Kanthack and Hardy[12] the granules seen in some leucocytes, such as those which stain with eosin, represent the secretion of the cell.

Leucocytosis.—The production of leucocytes in excess of the normal can be brought about by the injection of the products of animal and of vegetable cells. Of animal products there are especially those derived from nuclei such as nucleo-albumin, nuclein, nucleic acid, uric acid, also other nitrogenous products such as urea, peptone, albumose, spermin, and bacterial products, pyocyanin, tuberculin; among vegetable materials are curara, papayotin, abrin, pilocarpin, terebinthin, and cinnamic acid. These either excite lymphadenoid tissue directly or do so indirectly by destroying cells. Many diseases cause a considerable leucocytosis probably in the same way; it is met with in cancerous cachexia, in the stage before death, after hæmorrhage, in inflammation of serous membranes, and in pneumonia. This leucocytosis when it occurs in the general diseases of lymphadenoid tissue is termed leucocythæmia or leukæmia. A slight degree of leucocytosis may exert a favourable influence. Löwy and Richter[13] found that rabbits required much larger doses of such virulent materials as culture of diphtheria, chicken cholera, pig typhoid organisms, or pneumococci, in order to affect them after a certain degree of leucocytosis had previously been produced whether by the injection of spermin, pilocarpin, &c., or by the production of hyperpyrexia by puncture of the corpus striatum. Pawlowsky[14] found rabbits in which a local leucocytosis was produced at the site of the inoculation of an anthrax culture by the injection of papayotin or abrin recovered, whereas the control animals similarly inoculated, but in which no leucocytosis was afterward produced, died. An excessive leucocytosis or leucocythæmia is unfavourable, not only by destroying red cells and disturbing the production as already pointed out, but by promoting an excessive destruction of white ones also. This continued cell destruction keeps up the excessive production by the lymphadenoid tissue and liberates from the nuclei of the cells proteids which set up intra-vascular coagulation, and hence the thromboses, ulcerations, and hæmorrhages which accompany leucocythæmia. It is the mature white corpuscles probably which have the chief protective power; the young white cells hurried into the blood in leucocythæmia

[11] Hunter: Physiology and Pathology of Blood Destruction, THE LANCET, Nov. 26th, Dec. 3rd, 10th, and 17th, 1892, pp. 1259, 1318, 1371. The Pathology of Jaundice, Journal of Pathology and Bacteriology, 1895, p. 259.

[12] Kanthack and Hardy: Philosophical Transactions, 1894, vol. clxxxv., p. 279.

[13] Löwy und Richter: Centralblatt für Wissenschaftliche Medicin, 1895, S. 445.

[14] Pawlowsky: Atti dell' XI. Congresso Medico, Roma, 1894, vol. ii., Patologia generale, 165.

before they have developed cannot exercise the power, and they also tend quickly to break down.

We have thus traced back the anæmia and leucocytosis or leucocythæmia seen in connexion with the diseases of lymphadenoid tissue to the same cause—an excess of cell-products which excite the divisions of the leucoblasts, in consequence of which unripe red cells are hurried into the circulation from the bone-marrow, and, being inefficient as oxygen carriers, are soon included and destroyed in the spleen; at the same time the immature white cells which get into the circulation cannot fulfil their protective functions and may soon liberate substances which cause intravascular coagulation.

THE SPLEEN.

The spleen is an important blood-forming organ in amphibia and fish, and also in the mammalian embryo, but no proliferating red cells are to be seen in the healthy adult spleen of man. The centre of the Malpighian bodies is the site of the active germination of white cells, which pass to the periphery of the follicle and so get into the lymphatics, leaving the spleen; thence they pass through glands about the tail of the pancreas through the cœliac glands into the thoracic duct. The cells lining the spaces of the spleen pulp, through which the blood slowly flows, englobe and destroy red corpuscles and other foreign and harmful material. This function is especially active during digestion when the organ swells. The inherent rhythmical contractility residing in the unstriped muscle of the capsule and trabeculæ of the spleen favours the return of venous blood from the pulp spaces, especially after these have become distended during digestion. This rhythmical contractility has been not only the subject of experiment in animals, but has been observed during operations upon man. The spleen has been seen to contract under the eye when the return of venous blood had been hindered previously by its displacement. The spleen when prolapsed into a wound, so that the efferent veins are compressed, quickly becomes enormously swollen.

The effect of removal of the spleen.—Complete splenectomy produces a temporary anæmia and enlargement of lymph glands, but neither condition is well marked. They occur both after experimental splenectomy in animals and also in the human subject when a spleen has been removed which had up to a short time before been healthy—e.g., when the spleen has been removed for injury or on account of a twisted pedicle (Ballance).[15] No change follows upon the removal of a diseased spleen, either in the blood or in the lymph glands, for the functions of the spleen have already been assumed by the lymph glands, &c., before the operation. Some experimenters on animals have found them little affected by it. The existence of a spleniculus which hypertrophies when the spleen is removed may explain this absence of symptoms, or, owing to a small portion of the spleen being left on the proximal side of the ligature, the spleen may re-form (Laudenbach).[16] After partial resection, however, healing takes place simply by scar tissue without any hypertrophy.

The protective functions of the spleen.—The cells of the spleen pulp can stop and remove from the circulation abnormal blood corpuscles, pigment, and some forms of organisms. Large cells are seen enclosing red or white corpuscles, bacteria, &c. (cellules d'arrêt: Cæsaris Demel).[17] According to Metchnikoff[18] and Soudakewitch[19] the spirilla of relapsing fever multiply rapidly in the blood, but on reaching the spleen they are taken up and destroyed. If the cells become exhausted spirilla escape, and becoming again free in the blood rapidly increase again. Werigo[20] noted that anthrax bacilli injected into the ear vein of a rabbit reach the spleen and liver and are there included by cells. But soon free bacteria are found in the spaces of the spleen pulp, and then they multiply rapidly and cause the spleen to swell. During the last stages of the disease the bacteria escape into the general blood stream. There are other parasitic diseases—such as typhoid fever, diphtheria, and malaria—where the spleen appears also to play, in part at least, a protecting *rôle*. But, on the other hand, there are conditions in which it remains unaffected.

The pathological changes in the spleen arise either in connexion with disturbances of its circulation or are due to inflammatory changes consequent upon the collection of morbid products in it. A diseased spleen affects the body generally either by producing leucocythæmia and anæmia or by acting as an abdominal tumour.

Circulatory disturbance.—Venous obstruction concurrent with obstruction to the portal circulation causes first an engorgement of the pulp, then a general increase of connective tissue which does not especially pick out the follicles. Embolism affects the spleen according to the vessel, whether a main vessel is affected or several small ones. In pyæmia the necrosis goes on to suppuration around the bacteria which have lodged there. Infarcts from thrombosis are a special feature of the spleen. They are met with in typhoid fever, malaria, and leucocythæmia owing to the coagulation produced by the breaking down of leucocytes. A wedge-shaped mass is formed abutting on the surface, which can thus be distinguished from other changes.

Inflammatory changes the result of infection.—The spleen is rarely affected by tubercle until the disease has become generalised. The bacilli have to pass through lymphatics and lymphatic glands into the blood stream before they can reach the spleen. The tubercles generally form in the sheath of the bloodvessels and in the Malpighian bodies. The Malpighian bodies appear as pale, firm masses which may easily be confounded with the changes due to lymphadenoma. Syphilis, especially when inherited, affects the spleen either directly in the form of gummata or by a general overgrowth of connective tissue or indirectly by starting amyloid disease. Amyloid disease may commence in a previously healthy spleen from some cause other than disease of lymphadenoid tissue, and by commencing in the follicles form the so-called "sago spleen," or it may be widely diffused around the vessels of the pulp, and give rise to a hyalin appearance on section which has been compared to bacon rind. Amyloid disease may also affect a spleen previously altered by malaria, tubercle, syphilis, &c.

The spleen in malaria.—In malaria the spleen is primarily affected by an increased vascularity, in connexion with which there is an inclusion by the cells of the pulp of the corpuscles which are degenerating owing to the parasites, and there is left behind much pigment. This increased vascularity may cause only a temporary swelling of the spleen, and the organ afterwards subsides. The more permanent enlargement is due to an increased connective tissue formation whether specially of the follicles or diffusely of the pulp. Infarcts also occur. The stopping function of the spleen may be so far successful that the patient ceases to suffer from malaria. Presumably in such a case the spleen has taken a prominent part in removing the parasites from the circulation. The spleen may not, however, subside after the cessation of the malaria, but remains an abdominal tumour, obstructing by its large size the abdominal circulation, and being in danger of causing at any time intra-peritoneal hæmorrhage either by the rupture of the tumour itself from some slight injury or often adhesions which have formed between the capsule and neighbouring structures. Such patients remain thin and anæmic, and an improvement in health may follow on splenectomy, always provided that the malaria has subsided and there is no leucocythæmia present. The improvement may be due simply to the removal of an abdominal tumour forming a mass of diseased tissue.

THE BONE MARROW.

Red and yellow marrow.—From the time when ossification commences in the previously non-vascular fœtal cartilage by an invasion of bloodvessels from the perichondrium there appear erythroblasts developing into red corpuscles, and at a later period leucoblasts, which form the small colourless cells. Wherever ossification is going on there is an active formation of red corpuscles; and not only in cartilage and membrane, but also in exceptional cases of ossification, such as those which occur late in life in the laryngeal and rib cartilages, Neumann found erythroblasts. The formation of the red corpuscles in the red marrow is a feature common to all vertebrates, and is only absent in those fish whose cartilage persists throughout life as solid rods. In adult mammals it is the sole manufactory for the red corpuscles. The red marrow, however, gradually disappears from the bones of the extremities, being last of all found in the cancellous tissue of the upper

[15] Pitts and Ballance: Transactions of the Clinical Society, 1896, vol. xxix., p. 102. Also discussion by Ballance, Bland Sutton, &c., THE LANCET, Feb. 22nd, 1896.

[16] Laudenbach: Virchow's Archiv, 1895, Band cxli., s. 201.

[17] Cæsaris Demel: Archives Italiennes de Biologie, 1896, tome xxvi., p. 83.

[18] Metchnikoff: Virchow's Archiv, 1887, Band cix., S. 176.

[19] Soudakewitch: Annales de l'Institut Pasteur, 1891, tome v., p. 545.

[20] Werigo: Ibid., 1894, tome viii., p. 1.

end of the humerus and femur. It is present in the flat bones, especially in those of the vertebræ and skull, although even in the flat bones yellow marrow takes the place of much of the red late in life. The yellow marrow which fills the long bones of the adult must not be regarded as identical with the fat of connective tissue. It must be compared with the fatty masses which replace the thymus and lymphatic glands, for under certain circumstances the yellow again changes to red. It is also asserted that the administration of yellow marrow has had a beneficial effect in anæmia by promoting the production of red corpuscles, a result which cannot be attributed to simple fat. Marquis[21] has described the marrow in the long bones of the frog, which is red during the active period in spring, becomes mixed with yellow during the summer, but during the autumn and winter rest is entirely yellow. Yellow marrow may, therefore, be regarded as red marrow in a state of quiescence. In chronic wasting diseases such as pulmonary emphysema, tuberculosis, chronic renal nephritis, and also on account of starvation nearly all the fat may be absorbed, causing the yellow marrow to have a jelly-like appearance. The fatty marrow may, on the other hand, increase accompanying eccentric atrophy of the bone until the bone becomes a mere shell and it may even float in water. This occurs especially in cases of senile osteomalacia.

The myeloplaxes or giant cells of the marrow.—The multinucleated myeloplaxes are found in Howship's crypts bordering on the marrow. They show marked powers of movement on the warm stage and also englobe particles. If carmine be injected into the marrow cavity, it is found included in the giant cells near the site of the injection. If an excess of the carmine be injected, the giant cells containing these particles are easily seen in the blood, and carmine is also found in the lungs, liver, spleen, and kidneys, showing that there is an easy exit from bone (Arnold).[22] Multinuclear giant cells are carried into the blood and appear there under a number of circumstances. But their presence in the blood does not indicate any excessive production of them in the marrow.

Lymphoid marrow.—The yellow marrow may be replaced by marrow varying in colour from a pinkish grey up to a deep red. But the lymphoid marrow as met with in disease is by no means the same as the red marrow of the young healthy animal. There is in lymphoid marrow not only a marked increase of the small colourless marrow cells and of the nucleated red cells, but many of the latter are found free in the capillaries, and there is an increase of blood pigment without there being evidence that this pigment can be worked up again as hæmoglobin. The excess of pigment is the result of hæmorrhages due to thrombosis of the blood-vessels, and this thrombosis is a sign that a destruction of leucocytes is in progress. Lymphoid marrow is best marked in pernicious anæmia, in which disease the prevailing factor is the excessive destruction of blood in the spleen and liver. In a like manner chronic septic absorption, especially chronic suppuration of bone, tends to produce lymphoid marrow. In cancerous cachexia a similar condition of the marrow may be also found, but it is necessary to distinguish lymphoid marrow from a diffuse infiltration of the marrow by secondary cancerous growths, which is often difficult. It is difficult to draw a sharp distinction between the lymphoid marrow produced by lymphadenoma accompanied by leucocythæmia and anæmia and new growths of lymphadenoid structure originating in the marrow from the small marrow cells (myeloma or lympho-sarcoma), except that these growths are circumscribed, at any rate in the earlier stages.

The inflammatory diseases of the marrow, as compared with those of the spleen and lymphatic glands, are limited in variety, for the organisms of most infectious diseases are not arrested in the bone. Only a few kinds are so stopped—e.g., tubercle bacilli, the organisms of syphilis, and pyogenic cocci. They infect especially the ends of the long bones of young subjects in which red marrow is still present, and which are especially vascular in the neighbourhood of the epiphyses. These organisms arriving by the circulation settle down and grow, being especially favoured if a blood-clot due to some slight injury be present. In older patients the periosteum, as the most vascular part of bone in the adult, is more likely to be affected than the marrow.

[21] Marquis: Inaugural Dissertation, Dorpat; also Centralblatt für Pathologie, &c., 1893, Band iv., S. 459.
[22] Arnold: Virchow's Archiv, 1895, Band cxli., S. 411.

The Arris and Gale Lectures

ON

SOME POINTS IN THE PATHOLOGY OF HEART DISEASE.

Delivered at the Royal College of Surgeons of England on Feb. 22nd, 24th, and 26th, 1897,

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LECTURE II.[1]

Delivered on Feb. 24th.

THE EFFECTS OF HEART FAILURE ON THE CIRCULATION.

MR. PRESIDENT AND GENTLEMEN,—In my previous lecture I discussed the conditions which may lead to a failure of the compensatory mechanisms of the heart. In this lecture I propose to deal with the effects of such failure on the circulation generally, that is to say, on the blood, and the pressure and velocity of this fluid in the different parts of the circulatory system.

I would, in the first place, remind you of some of the elementary facts in the physiology of the circulation. It must be remembered that the vascular system forms a closed circuit of elastic tubes. In one part of this circuit is included a pump—the heart, the contractions of which will, in consequence of the presence of valves, propel the contained fluid in one direction only. In this system there is a resistance to the flow of blood in consequence of the friction between the blood and the vessel wall in the small arteries and to a lesser extent in the capillaries. There is also a difference in the structure of the walls of the tube on the arterial and venous sides, so that a small rise of pressure in the veins will cause a considerable dilatation and increase in capacity of these vessels, whereas on the arterial side the injection of a small quantity of fluid will bring about a large rise of pressure. If the blood is at rest in the system, and assuming that all parts of the system lie in one plane, it is evident that the pressure in all parts of the system must be the same. This pressure was termed by Weber the mean systemic pressure (not to be confused with mean arterial pressure), and amounts in a large dog to about 10 mm. Hg. If the heart now commences to beat, fluid is pumped from the venous side into the arterial side, where it accumulates to a certain extent in consequence of the resistance in the smaller arteries and capillaries, so raising the pressure on the arterial side and lowering the pressure on the venous side. The fall, however, on the venous side is not directly proportional to the rise on the arterial side, since, as I have pointed out above, a large change in the capacity of the veins is only attended by a small variation of the pressure within them, whereas the blood removed from the veins cannot be pumped into the much less distensible arteries without causing in them a considerable rise of pressure. Somewhere in the circulation there must be a point where the pressure is neither raised nor lowered and where, therefore, the pressure is independent of the cardiac activity. At first sight it might be thought that this neutral point must lie in the situation of the peripheral resistance—viz., between the arterioles and capillaries. It must be remembered, however, that even when the blood is circulating there is not necessarily, although there may happen to be generally, a fall of pressure all the way round the system. What does fall from the heart through the arteries, capillaries, and veins back to the heart is the energy in the fluid at any given point. The total energy of a mass of blood at any point in the system is represented, not only by the hydrostatic pressure at that point, but also by the kinetic energy of the moving mass of fluid ($= \frac{1}{2} mv^2$). In the capillaries, in consequence of the great area of the bed, the velocity is very small and rapidly increases in the veins. Hence the proportion of the total energy represented by $\frac{1}{2} mv^2$ is relatively small in the capillaries and relatively large in the veins. The other

[1] Lecture I. appeared in THE LANCET of Feb. 27th, 1897.

factor—the pressure—must be therefore relatively large in the capillaries and small in the veins. It thus follows that the neutral point in the vascular system, where the mean systemic pressure is neither raised nor lowered by the inauguration of the circulation, lies considerably on the venous side of the capillaries—at any rate, in most parts of the body.

Now in such a system it is evident that a failure of the heart pump, however induced, whether by vagus-inhibition, by damaged valves, aortic stenosis, or cardiac fatigue, can only cause a return of the pressures in the various parts of the system to one level—the mean systemic pressure. We shall, therefore, have a rise of pressure on the venous side of the neutral point and a fall of pressure on the arterial side. By actual experiment we may ascertain the extent and direction of the change of pressure in the various parts of the circulation. To this end we may register the pressure in the arterial system, in the vena cava, and in the portal vein. We may deal in the first place with the case in which the vessels are removed from the interference of the vaso-motor centre by section of the cord or splanchnic nerves, so that we may study the pure effects of cessation of the circulation. In such an experiment the pressures before cardiac inhibition were: Femoral artery, 58 mm. Hg; portal vein, 73 mm. H_2O; and femoral vein, 62 mm. H_2O. On exciting the peripheral end of the right vagus the heart stopped, and ten seconds later the pressures were: Femoral artery, 20 mm. Hg; portal vein, 72 mm. H_2O; and femoral vein, 68 mm. H_2O. After three minutes the pressures were: Femoral artery, 6½ mm. Hg = 84 mm. H_2O; portal vein, 33 mm. H_2O; and femoral vein, 32 mm. H_2O; so that complete equilibrium was established between the pressures at all parts of the system. Here the total failure of the heart pump caused a considerable fall in arterial pressure, a considerable rise in the vena cava pressure, and practically no alteration in the portal vein. The last represents, therefore, a neutral point of the system; in all parts distal to the portal vein there must have been a fall of pressure. The only part of the body, therefore, where heart failure can by itself cause a rise of pressure is in the large veins of the trunk and possibly in the capillaries of the liver.

In the living body, however, we never get a reproduction of so uncomplicated conditions. In a closed circuit of tubes, as described by Weber, the mean systemic pressure can only be increased by injecting a further amount of fluid into the system or by diminishing the capacity of the system. In the body neither the amount of circulating fluid nor the calibre and capacity of the vessels forming the system are constant quantities, and it is possible that changes in the heart leading to its failure may have as an immediate consequence an alteration either of the capacity of the system or of the amount of circulating fluid. We might therefore have, as the remote effect of heart-failure, an increase in the pressures, not only near the heart, but also in the peripheral capillaries. Thus, if we repeat the experiment of vagus inhibition just described, but carry it out on a normal animal, we find that at first the results of stoppage of the heart are exactly similar to those already described. After the inhibition has lasted from twenty to forty seconds the anæmia of the brain causes a strong excitation of the vaso-motor centre. We therefore get extreme vascular constriction, with diminution in the capacity of the system, as is evidenced by a considerable rise in portal, vena cava, and arterial pressures. We may, in fact, in consequence of this constriction, obtain a doubling of the mean systemic pressure. Another point which we must bear in mind is that the quantity of circulating fluid is intimately dependent on the pressures at various parts of the vascular system. Almost every fall of arterial pressure gives rise to a diminished concentration of the blood due to the taking up of fluid by the blood-vessels from the tissues, whereas a rise of blood pressure augments the concentration by causing increased transudation. With these varying factors to take into account it is impossible to predict in our study chairs what will be the effect of failure of the heart pump on the pressure and distribution of the blood throughout the different parts of the body, but we must in each case have recourse to experiment.

In attempting to deal with this subject experimentally one is met at the outset by the difficulty of reproducing clinical phenomena in the laboratory. We have to choose a method of interfering with the action of the heart-pump which resembles in some degree the chronic processes of nature; artificial stenosis or valvular lesions are useless for this purpose, owing to the wonderful powers of compensation possessed by the normal heart, so that the margin between complete compensation and absolute failure becomes too narrow for experiment. The best method is perhaps that adopted by Cohnheim—viz., the interference with the action of the heart by the injection of oil into the pericardium. By this means we may effect an impairment of the heart's action of considerable duration without running the risk of stopping its action altogether. In the experiments of this nature carried out by Cohnheim, this observer measured the pressures in the carotid artery and in the jugular vein, and noticed that as the diastolic expansion of the ventricle began to be affected by the injection of oil into the pericardium there was a fall of arterial, accompanied by a rise of venous, pressure. The jugular vein is, however, so near the heart and so influenced by the diastolic suction of this organ that one cannot deduce a general rise of venous pressures from the occurrence of a rise in this vessel. I have, therefore, repeated Cohnheim's experiment with two modifications. In the first case I have measured simultaneously the pressures in the inferior vena cava, in the portal vein, and arterial system, while at the same time oil was being injected into the pericardium. In the second series of experiments I have observed the influence of the pericardial injection on the circulation in the limbs, using as my guide the volume of the limbs.

We will consider, in the first place, the effects of injecting oil into the pericardium on the pressures in the portal vein, vena cava, and in the arterial system. In these experiments the animal having been anæsthetised with a large dose of morphia and A.C.E. mixture, cannulæ were placed in the central end of the splenic vein, all other vessels of the spleen having been ligatured, in the central end of the iliac vein, and in the central end of the carotid or femoral artery. The venous cannulæ were connected with manometers filled with coloured $MgSO_4$ solution, so that the height of the fluid could be easily read off on the graduated scales behind the tubes. The arterial cannula was connected with an ordinary mercurial manometer, the excursions of the meniscus being registered on the blackened surface of a kymograph. At the end of the experiment, the abscissæ having been taken, the readings were plotted out as curves. After the attachment of the manometers the chest was opened in the middle line and a cannula tied into an opening in the pericardium for the injection of oil, which was allowed to run in from a graduated burette. In one experiment of this sort the pressures at the beginning of the experiment were: arterial, 90 mm. Hg; portal vein, 128 mm. $MgSO_4$; and vena cava, 36 mm. $MgSO_4$. 20 c.c. of oil were then allowed to flow into the pericardium. This had no influence on the pressures in any of the vessels. Injection of another 20 c.c. then caused a slight rise in the vena cava to 40 mm. $MgSO_4$, but no distinct change in the other vessels. Injection of another 20 c.c. caused a rise—the vena cava to 58 mm. $MgSO_4$, a slight but temporary fall in the arteries, and no change in the portal vein. Another 10 c.c. injected gave a large rise to 76 mm. in the vena cava, a slight rise to 134 in the portal vein, and practically no effect on the arterial pressure. I had now arrived, after the injection of 70 c.c. of oil, at the limits of compensation possessed by the heart and vascular system for the hindered diastolic expansion. Injection of another 20 c.c. of oil now caused a very marked change in all the pressures. The arterial pressure sank to 56 mm. Hg, while the portal pressure rose to 160 mm., $MgSO_4$, and the vena cava pressure to 124 mm. $MgSO_4$. The injection of a further 10 c.c. put a stop to the circulation altogether. The arterial pressure sank to 26 mm., and then as the heart stopped to 18 mm., while the portal vein and vena cava rose first to 180 and 170 mm., and then with the stoppage of the heart, to 215 mm., the pressures in both vessels being practically the same. The oil was now suddenly let out of the pericardium, and the heart, after a short pause, re-commenced beating. The first effects of the re-establishment of the circulation were striking. With the very first heart-beat the pressure in the vena cava sank with extreme rapidity to its normal pressure of 36 mm., and then rose slightly to about 40 mm. $MgSO_4$. The arterial pressure rose with equal rapidity to a point far above its previous height—viz., 146 mm. Hg., to fall rapidly to 84 and then rise gradually towards the end of the experiment. The pressure in the portal vein, instead of falling, like that in the vena cava, continued to rise rapidly

on the re-commencement of the heart-beats until it attained the enormous height of 322 mm. $MgSO_4$, whence it fell in the course of the next six minutes to 148 mm. $MgSO_4$—i.e., somewhat above its height at the beginning of the experiment.

How are we to explain these results? It is evident that we have here at least two factors at work—viz., first, the gradual impairment and ultimate failure of the heart pump; and, secondly, a diminution of the capacity of the vascular system and consequent rise of the mean systemic pressure, brought about by the activity of the vaso-motor centre. We have already seen that the effect of a pure stoppage of the heart is to cause a rise of pressure in the vena cava and a fall in the arteries, while the pressure in the portal vein, which represents the neutral point of the system, remains practically unchanged. In this case, however, the vena cava pressure not only rises to the height of the normal portal pressure, but attains nearly double this amount, this rise being accompanied by a parallel rise in the portal vein and a large fall in the arteries. Now we know that any anæmia of the vaso-motor centre, however caused, excites its activity, and therefore active constriction of the vessels all over the body, but especially in the splanchnic area. As soon, therefore, as the hindrance to the diastolic expansion becomes sufficient to diminish the normal outflow of blood from the heart in a given time there is a fall of arterial pressure, and the vaso-motor centre is excited and endeavours to restore the arterial pressure to its normal height by an active constriction of all the arteries. That at the moment in the experiment when the heart stops the bloodvessels are constricted is shown by the enormous rise in pressure which occurs directly the heart re-commences to beat. The heart, which is richly supplied with blood from the distended venæ cavæ, propels this into the arteries, fills them up, and then has to overcome the resistance of the constricted arterioles, so that the pressure rises high above its normal amount, to sink again as this raised pressure furnishes a sufficient supply of blood to the vaso-motor centres of the brain, which, it seems, from the work of Bayliss and Hill and other observers, do not participate in any general vascular contraction. The rise of pressure in the portal vein is analogous to that which occurs in the arteries, and is due to the constriction of the branches of the portal vein in the liver, so that the trunk of this vessel is supplied with blood more rapidly than can be passed through the liver into the vena cava. This experiment brings out two facts which are of importance for our knowledge of the conditions in heart disease. In the first place, any heart failure will tend to be accompanied by active vascular constriction and a rise of mean systemic pressure, so that the pressure at the neutral point of the system, as well as on the venous side of this point, must be raised considerably above normal. In all cases, therefore, of heart failure there will be a large rise of pressure in the capillaries of the liver. In the second place, the existence of this vascular constriction shows that the heart, although inadequate to perform its functions, cannot relieve itself by calling on the depressor mechanisms when by so doing it would diminish below what is necessary the blood-supply to the vaso-motor centre.

We have now the important question to decide as to how far back this rise of venous pressure goes. Is the diminution in the capacity of the vascular system consequent on the vaso-constriction ever so great as to raise the pressure in the small veins and capillaries in the peripheral parts of the body such as the limbs? To determine this question one must carry out an experiment similar to the above, but at the same time enclose one limb in a plethysmograph and record changes in its volume by means of a Marey's tambour or a piston-recorder connected with the plethysmograph. If an experiment be arranged in this way and oil injected into the pericardium, it is found that, while the arterial pressure remains constant, practically no change occurs in the volume of the limb, although there may be a rise of pressure both in the portal vein and vena cava. As soon, however, as the compensatory mechanisms become inadequate and the arterial pressure begins to sink, the volume of the limb also diminishes. Thus the volume of the limb, and presumably therefore the pressure in its smaller vessels, including its capillaries and veins, is directly proportional to the arterial pressure, and is not altered by considerable changes in the venous pressures consequent on heart failure. We may conclude, therefore, that, even with coincident vascular constriction, the effect of heart failure must be a fall and not a rise of blood pressure in the capillaries and smaller veins of the limbs. Since this conclusion is opposed to the ordinarily accepted view, which we owe largely to Cohnheim, that failure of compensation in heart disease leads to a general rise of venous and capillary pressures in all parts of the body, we must inquire whether there may not be other factors at work by which a rise of pressure might be produced. Especially we can elevate the mean systemic pressure, not only by vascular constriction, but also by increasing the amount of fluid contained in the system—i.e., by causing a plethora. Are there any conditions in heart failure which might lead to a plethora sufficient to raise the venous and capillary pressures in the limbs in the absence of any arterial rise?

I pointed out last year that a slight degree of plethora must be the invariable consequence of any heart failure, since a fall of capillary pressure increased the fluid taken up from the tissues and diminished the transudation into the tissues. We therefore get a fall of specific gravity of the blood whenever the arterial pressure is lowered by heart failure or by bleeding. It will be noticed, however, that such an increased absorption of fluid from the tissues must come to an end as soon as the cause of the absorption is removed—i.e., as soon as the capillary pressure is restored to its normal amount, so that a plethora brought about in this way could never be made responsible for a rise of capillary pressure in the limbs. Of course, even when the pressure in the limb capillaries has attained its ordinary amount there is one factor left tending to produce a hydræmia or hydræmic plethora — viz., the diminished urinary flow in consequence of lowered arterial pressure,—and last year I thought that possibly this factor would be sufficient to cause a condition of hydræmic plethora in heart disease and raised capillary pressure in the limbs. Whether this is or is not the case can only be decided by direct clinical observation. If a condition of hydræmic plethora be present in uncompensated heart lesions we should expect to find—(1) a diminution in specific gravity of the whole blood; and (2) a diminution in the amount of hæmoglobin and number of corpuscles present in the blood.

With regard to the first point, it has been shown fairly conclusively by Lloyd-Jones that in failure of compensation there is a marked diminution in the specific gravity of the whole blood. Now this diminution might be due to a hyperplasmia of the blood, possibly brought about by a condition of plethora or to a decrease in the solids of the plasma or corpuscles or of both—i.e., either to hydræmic plethora or to hydræmia. In order to decide which of these two conditions is responsible for the lowered specific gravity we must have recourse to the determination of the hæmoglobin and corpuscles in the blood of such persons. On referring to the various researches on the subject we find a considerable discrepancy. According to the majority of writers, the relative number of corpuscles in the blood of patients suffering from heart disease is increased, whereas according to others, such as Stintzing and Gumprecht, the exact opposite is the case. In face of this discrepancy Dr. Fawcett has undertaken a series of observations on the amount of hæmoglobin and the number of corpuscles in the blood of patients suffering from heart disease, whether accompanied or not by signs of so-called "backward pressure." Although these researches are not completed, he has kindly allowed me to quote some of his results in this lecture.

The first case investigated seemed at first to favour the hypothesis of the existence of hydræmic plethora.

CASE 1. *Mitral disease.*—This patient, aged thirty-three years, was admitted to hospital on Oct. 30th, 1896, with œdema and ascites of a month's duration. On Nov. 3rd the hæmoglobin amounted to 48 per cent.; on Nov. 14th it was 50 per cent.; on Nov. 24th, 54 per cent.; on Nov. 30th, 65 per cent.; and on Jan. 10th, 1897, 85 per cent. Here there was a marked increase in the percentage amount of hæmoglobin during the patient's stay in the hospital. It must be remarked, however, that the œdema and ascites had disappeared entirely by Nov. 11th, when the hæmoglobin was only 50 per cent., and that the condition of the blood only commenced to improve markedly with the administration of iron, which began on Dec. 7th. In all the other cases investigated the amount of hæmoglobin, even when marked ascites was present, was either above normal or very little below.

CASE 2 *Mitral stenosis and regurgitation, with tricuspid*

regurgitation.—This was a patient aged twenty-eight years. On Nov. 11th the hæmoglobin amounted to 100 per cent. and there were œdema of the legs and ascites. On Dec. 12th the hæmoglobin was 97 per cent., and the ascites and œdema had disappeared.

CASE 3. *Mitral stenosis (ulcerative endocarditis).*—This was a patient aged forty-one years. On Nov. 11th the hæmoglobin was 105 per cent., and there was much œdema. On Nov. 24th the hæmoglobin had risen to 110 per cent.; there was still much œdema, and the patient died on Nov. 27th.

CASE 4. *Bronchitis with heart failure.*—This was a patient aged twenty-three years. On Nov. 18th the hæmoglobin amounted to 97 per cent., and there were œdema and ascites. On Dec. 7th the hæmoglobin was 90 per cent., and the patient was in the same condition and died on Dec. 8th.

In nearly all cases it was found that the number of corpuscles was increased to a greater extent than the hæmoglobin, so that the corpuscles themselves contained less hæmoglobin than normal.

It will be seen that these results lend no support to the view that failure of compensation is attended by a condition of plethora. They tend rather to show that the amount of blood in the circulation is subnormal, unless we adopt the unlikely supposition that the defective aeration of the blood in this disease acts like mountain air, in stimulating the production of red corpuscles and hæmoglobin. We must, therefore, conclude that there is no condition of the plethora, hydræmic or otherwise, in heart disease, and that the lowering of the specific gravity of the whole blood is due to a diminution of solids of the plasma, and possibly also of the corpuscles—i.e., there is hydræmia, but no plethora. Since the volume of the fluid contained within the vascular system is not increased, the only factor which can contribute to the raising of the mean systemic pressure, and a consequent production of a rise of pressure in the peripheral veins and capillaries by failure of the heart-pump, is the active vascular constriction caused by the anæmia of the vaso-motor centre. We have already studied the limits of a rise of systemic pressure so produced, and have seen that it is inadequate to bring about a rise of capillary pressure in the limbs when the heart fails. We must, therefore, conclude that the ordinarily accepted notion is erroneous which assumes that the pressure in the capillaries and veins all over the body in uncompensated heart disease is raised. The pressure must in these situations follow the arterial pressure, and thus be lowered. The only parts of the body where there can be a rise of pressure in heart disease are the capillaries of the liver (whence the well-known "nutmeg" liver of this disorder) the great veins near the heart, and possibly in the system of capillaries which surround the tubules of the kidney. In the limbs, and probably in the abdominal viscera other than those just mentioned, the capillary pressure will be lower than in the normal individual.

For many years, and, indeed, since the time of Richard Lower, we have been wont to pride ourselves on our exact understanding of the factors responsible for the production of anasarca and ascites in heart disease, and have confidently ascribed the increased serous exudation to the rise of pressure in the capillaries due to the transmitted backward pressure from the incompetent heart, and the dropsy of heart disease is generally regarded as affording striking support to Ludwig's filtration hypothesis of lymph formation. The whole argument is, however, based on the false assumption that there is a rise of pressure in the smaller veins and capillaries in heart disease; whereas, as I have just shown, the reverse is the case. We must, therefore, seek for some other explanation of the dropsy in this disease.

VICTORIA HOSPITAL, SWINDON. — The ninth annual meeting of the Victoria Hospital, Swindon, was held on Feb. 13th. The report of the general committee showed the total expenditure for the past year to have been £419, against receipts amounting to £500; the sum of £107 was due to the treasurer on account of the building and furnishing fund. There were 153 patients admitted in 1896, against 131 in 1895, the average cost of each being 2*s.* 11¾*d.* daily. The committee suggested that the celebration to be held in Swindon on account of the Queen's long reign should take the form of raising funds for the benefit of the hospital.

A SUCCESSFUL CASE OF INTRAVENOUS INJECTION OF SALT SOLUTION AFTER LAPAROTOMY IN A CASE OF RUPTURED TUBAL GESTATION.

BY ARTHUR H. N. LEWERS, M.D. LOND.,
OBSTETRIC PHYSICIAN TO THE LONDON HOSPITAL.

ON April 20th, 1896, I was called in by Dr. Fennell of Dalston to see a married woman, aged thirty years, when the following history was obtained. She had been married nine years and had had four children, the last nineteen months previously. There had been no miscarriages. Instruments were used at the first confinement, but not at the others. She generally got up ten days after her confinements, but after the last confinement she was in bed nearly two months on account of what the medical attendant told her was peritonitis. Menstruation was quite regular up to Feb. 26th, 1896, but she "saw nothing" in March. She took some pills on April 4th with a view to bringing on the period; these gave her great pain. On April 6th a vaginal discharge containing blood began, and she had been losing blood more or less ever since up to the day when I first saw her (April 20th). The patient said that a solid substance came away from the vagina on April 11th when passing urine. She had had some pain in passing urine and had suffered from constipation since April 6th. She said that she had had pain at the lower part of the abdomen, especially over the left iliac region, for some days before I saw her, and there was an especially sharp attack of pain on the early morning of April 20th. On examination of the abdomen there was some resistance in the left iliac region and some tenderness there. The breasts did not appear active. On vaginal examination there was a little blood to be seen about the external parts. The uterus was anteverted and slightly flexed and distinctly larger than normal, although the sound only passed three inches. A swelling was felt behind and to the left of the uterus occupying the left posterior quarter of the pelvis. It was distinctly elastic and could be displaced a little by upward pressure. The case appeared to me in all probability to be one of extra-uterine pregnancy. The question arose as to whether the substance passed by the patient a few days before I saw her might not have been an ovum, and the case one of ordinary miscarriage, with possibly some peri-uterine inflammation; but, on the whole, it seemed to me much more probable that the case was really one of tubal pregnancy, and that the substance in question said to have been passed, if anything more than a clot, was probably a decidual cast of the uterus. The arrangements of the patient's home were not very convenient for performing abdominal section, and accordingly I had her removed to the London Hospital, where she was admitted under my care on April 21st.

Operation.—On April 23rd she was anæsthetised with the A.C.E. mixture; the abdomen was opened in the usual way and was found to contain blood and masses of clot. The left Fallopian tube was considerably enlarged and had ruptured. The left ovary contained a large corpus luteum with a well-marked yellow convoluted border. The uterine appendages on the right side were also slightly enlarged, and the uterus was considerably enlarged. The appendages on both sides were removed in the usual way and the peritoneum well washed out with saline fluid. A Keith's tube was inserted and the rest of the abdominal incision was closed. When this had been done it was observed before the dressing was put on that the Keith's tube had become full of dark blood. This was withdrawn once or twice, but the tube very soon became again full of blood. The abdomen was therefore re-opened to discover the source of the bleeding; the stumps of the broad ligaments were pulled up and inspected, but no blood was coming from them. On looking at the back of the uterus there were some quite superficial tears in the peritoneal coat near the level of the internal os, from which blood was coming rather freely. Several attempts were made to control this bleeding by passing silk ligatures on a curved needle under the tissues at the bleeding point and tying, and also by applying Wells's forceps; but the tissues were so friable that the more manipulation took place in the neighbourhood of the tears

the worse the bleeding became. I therefore decided to perform supra-vaginal hysterectomy; the uterine arteries were ligatured on each side outside the uterus, and then the body of the uterus was cut away. A large pair of Wells's forceps was left on, but the surface of the stump oozed rather freely, and two silk ligatures were passed right and left from before backwards and tied firmly to check it. Some iodoform gauze was packed over the stump, a small piece being left sticking out at the lower end of the wound. A Keith's tube was inserted and the remainder of the wound closed in the usual way. The re-opening of the wound and the various measures that were required to permanently control the bleeding had occupied a considerable time, and, besides, a good deal of blood had been lost, taking into consideration what was extravasated in the abdomen by the extra-uterine sac before operation, and also reckoning the amount that was lost from the superficial tears on the back of the uterus. How these were produced I am unable to say positively. My impression is, however, that some of the masses of clot removed were partially adherent to the uterus, and that in removing them the peritoneal coat of the uterus must have been slightly torn, and then the tissues were so friable that almost any kind of manipulation—sponging, pulling up the uterus, and the like—seemed to increase the laceration and the hæmorrhage. At all events, at the end of the operation, when the patient was put back to bed, her face was quite white, her hands and feet quite cold, and no pulse could be felt at the wrist; and I have no doubt whatever that had she been left without further treatment she would certainly have died, probably without regaining consciousness at all. I decided, however, to try the effect of injecting salt solution into the veins. Our stock of boiled water had been exhausted in washing out the abdomen during the operation, so that the water used in making the salt solution for intravenous injection was merely the water out of the kettle and out of the tap. The salt solution, however, was sterilised, because we keep a concentrated solution of it which is carefully prepared and boiled before each operation. A glass reservoir was filled with salt solution at the temperature of 100°F. and containing a drachm of common salt to each pint. The injection was made into the median cephalic vein of the left arm, the necessary pressure being obtained simply by hanging up the glass reservoir on the wall about three feet above the patient's head. After one pint had been injected the patient's pulse at the wrist could be felt. After four pints had been injected the pulse was as good as it had been before the operation. The patient made a good recovery. I have seen her several times since she left the hospital; the abdominal wound is soundly healed, and she remains quite well.

Harley-street, W.

ON THE APPLICATION OF THE SERUM TEST TO THE DIFFERENTIAL DIAGNOSIS OF TYPHOID AND MALTA FEVER,

AND ON THE FURTHER APPLICATION OF THE METHOD OF SERUM DIAGNOSIS TO THE ELUCIDATION OF CERTAIN PROBLEMS IN CONNEXION WITH THE DURATION OF IMMUNITY AND THE GEOGRAPHICAL DISTRIBUTION OF DISEASE.

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IT is notorious that every clinician in tropical and sub-tropical countries is constantly meeting cases of continued fever of which he finds it impossible to say whether they are cases of typhoid fever, of Malta fever, of malarial fever, or of some other (possibly as yet undescribed) variety of continued fever. In cases of this kind, and further in cases where it is desirable that a diagnosis should be arrived at early in the course of the disease, the prompt and accurate methods of diagnosis which medical research has recently placed at our disposal will be everywhere welcomed. Three of such methods of diagnosis are at present available. In the first place, the blood may be examined microscopically with a view to determining the presence or absence of pathogenic micro-organisms. This method is of particular utility in connexion with the determination of the presence or absence of the micro-organisms of malaria and of spirillum fever. In the second place, the excretions (and, in particular, the urine[1]) may be examined by appropriate cultivation methods with a view to determining the presence or absence of pathogenic micro-organisms. This method is applicable to typhoid fever. It is probably also applicable to Malta fever. Lastly, the method of serum diagnosis may be applied. By this method the blood of a patient who is suffering, or who has suffered, from a continued fever is tested in turn with any pathogenic micro-organisms that may be available, and in particular with the micro-organisms which are causally associated with typhoid fever and Malta fever. We have recently been applying this serum test to the diagnosis, and especially to the after-diagnosis, of tropical and sub-tropical continued fevers. Convalescents from these fevers come under observation in Netley in the persons of soldiers and others who are invalided home from military stations abroad.

METHODS.

Blood is readily obtained in sufficient quantities from the finger tip by puncturing the back of the finger near the nail. It is then drawn off into a pipette, such as is represented in Fig. 1. This pipette is converted into a blood capsule by sealing it in the flame at the points indicated in the figure by the letters *x x*. After twenty-four hours, or as soon as the blood has duly separated into serum and clot, the ends of the blood capsule are broken off and the separated serum is drawn off by a capillary pipette, as indicated in Fig. 2. The amount of serum which is drawn off is indicated by placing a mark *y* on the outside of the capillary pipette. The serum is then blown out into a watch glass and is diluted first fivefold by filling up the capillary pipette four times in succession with normal salt solution and by blowing this salt solution out into the serum in the watch glass. In this manner any desired dilutions are obtained. It is convenient to make 5-, 10-, 25-, 50-, and 100-fold dilutions of each sample of serum.

Having diluted the serum in this manner a small quantity of the diluted serum is allowed to run up into the sedimentation tube[2] represented in the diagram by Fig. 3. For the sake of clearness let it be supposed that diluted serum has been allowed to run up the tube to the point indicated by the letter *a* in Fig. 3. This point is now indicated on the outside of the sedimentation tube by a red mark. Having filled in the tube in this manner with the desired amount of diluted serum, the point of the capillary pipette is now turned upwards, so as to admit a bubble of air into the point of the capillary pipette. The diluted serum now occupies the position indicated in Fig. 3 by the space *c* to *d*, the bubble occupying the space between the letters *b* and *c*. Having thus introduced our bubble of air, which is to serve the purpose of an index, the end of the capillary pipette is immersed into a perfectly fresh emulsion made from a young culture of either typhoid or, as the case may be, Malta fever bacteria. The emulsion is allowed to run in until it reaches the point *a*. We have now introduced an equal quantity of diluted serum and of typhoid or Malta fever emulsion into our sedimentation tube. The next step is to mix the bacterial emulsion with our diluted serum. This is easily done by aspirating by means of the india-rubber tube T the contents of the capillary pipette two or three times in succession into the mixing chamber *z*. Having thus obtained an intimate mixture of an equal portion of the diluted serum and of the bacterial emulsion, we blow the contents of the tube down into the stem of the pipette, taking care not to blow it down too near the end of the pipette, and we seal the point of the pipette in the flame. We then label the capillary pipette 1 in 10, if we have mixed an equal volume of 5-fold diluted serum with a bacterial emulsion; 1 in 20, if we have employed a 10-fold diluted serum, and so on. We then put up a control tube of the bacterial emulsion

[1] The importance both from a diagnostic and a hygienic point of view of recognising the presence of typhoid bacilli in the urine was pointed out in a paper which was written by one of us in conjunction with Surgeon-Major Semple (THE LANCET, July 27th, 1895). The results which were arrived at in that paper have been recently confirmed and somewhat extended by Dr. P. Horton Smith (Royal Medical and Chirurgical Society, Feb. 7th, 1897).

[2] Mr. A. E. Dean, jun., 73, Hatton-garden, E.C., is, at my suggestion, making sero-sedimentation tubes of stout glass. Provision is made in these tubes for preventing the escape of the contents when the tubes are placed upright so as to allow of sedimentation.

mixed with normal serum or with salt solution, and finally we place the whole series of sedimentation tubes upright in an ordinary test-tube labelled with the name of the patient and the date. Figs. 4 and 5 represent such capillary pipettes after the lapse of twenty-four hours. In Fig. 4 the dark shading seen at *x* represents a pellet of either typhoid or Malta fever bacteria which have been immobilised and agglomerated by a serum from a person who is undergoing, or who has undergone, the specific fever which corresponds to the variety of bacteria which have been employed. Fig. 5 represents the control pipette which in the case of the eminently motile Malta fever or typhoid bacteria remains evenly turbid.

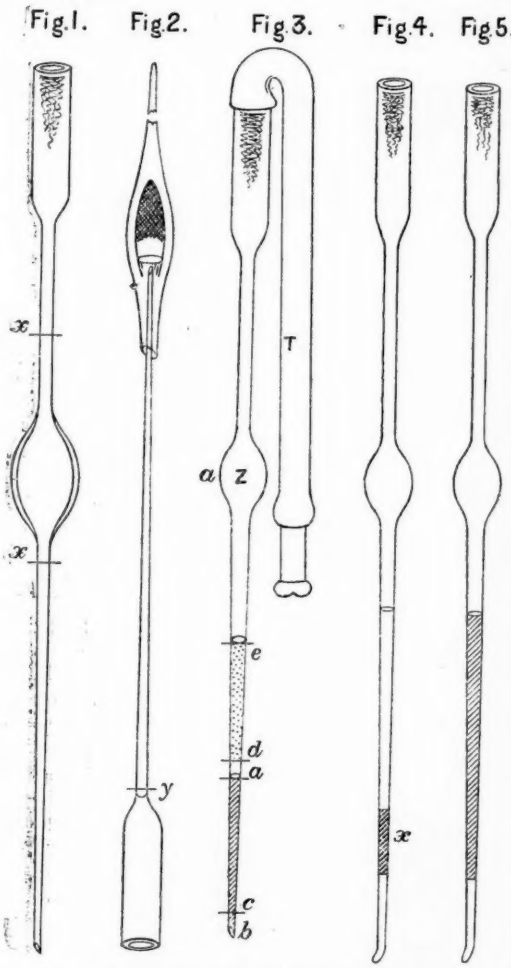

Fig. 1. Capillary pipette for drawing off blood from finger. Fig. 2. Method of drawing off serum from blood capsule. Fig. 3. Sedimentation tube filled in and ready for mixing. Fig. 4. Sedimentation effect produced by specific serum. The pellet of agglomerated bacteria is seen at *x*; the supernatant fluid is clarified. Fig. 5. Control tube. No sediment is seen at bottom of tube; the fluid is not clarified.

Examples of the application of the method.—The following are typical examples of the application of the method of serum diagnosis to the differentiation of Malta fever from typhoid fever.

Example I.—Sergeant L——, of the Medical Staff Corps, arrived from Aldershot in October, 1896, having been detailed for duty at Netley. A few days after arrival at Netley the patient "reported sick" and was admitted to hospital with a recrudescence of a fever from which he had suffered some months before. His papers showed that this fever had been diagnosed to be typhoid fever. The patient's serum showed absolutely no reaction with the bacillus typhosus. His serum in 10-, 25-, 50-, 100-, and 200-fold dilutions showed a very marked reaction with the micrococcus Melitensis of Bruce. Inquiry into the patient's history revealed that when he went into hospital at Aldershot he had only recently returned from Gibraltar.

Example II.—Sergeant F——, of the Medical Staff Corps. The patient was admitted to hospital in Malta on Oct. 2nd, 1896. He died in hospital on Nov. 20th. Some of his symptoms, such as diarrhœa associated with blood in the stools, were suggestive of typhoid fever. The necropsy, however, showed only slight ulceration of the colon, and the absence of any implication of Peyer's patches. In the light of the facts, his case was diagnosed as having in all probability been a case of Malta fever.

A *stepson of the above*, aged nine years, contracted fever in Malta and died at the end of November after ten days' illness. The case was diagnosed as probably one of typhoid fever.

Another stepson, aged seven and a half years, contracted fever in Malta at the beginning of last December, and was immediately invalided home. Doubts were expressed in his papers as to whether the case was one of Malta fever or of typhoid fever. He is now quite convalescent. His serum gives an absolutely negative reaction with the micrococcus Melitensis, but gives a very marked effect in 10-, 25-, 50-, a 100-fold dilutions with the bacillus typhosus.

The *wife of Sergeant F——* contracted fever in Malta in the month of September. She was in bed for ten days. The serum gives an absolutely negative reaction with the bacillus typhosus. The serum, however, gives in 10-, 25-, and 50-fold—but not in 100-fold—dilutions a characteristic reaction with the micrococcus Melitensis.

A *child of Sergeant F——*, a girl aged three years, contracted fever in Malta in May, 1896 She suffered severely from fever till the end of September, 1896. She is now quite convalescent. Her serum gives absolutely no reaction with the bacillus typhosus, but the serum in 10-, 25-, 50-, 100-, and 200-fold dilutions gives very marked reaction with the micrococcus Melitensis.

It will be obvious how very difficult a clinical problem was presented by this last series of cases, and how very easily clinical problems of this kind can be re-solved by the employment of the method of serum diagnosis.[3]

Example III.—Private P—— (at present under treatment in Netley), invalided home from India for secondary syphilis. He has suffered for the last four months from a continuous but very irregular fever, which has some resemblance to to the typical curve of Malta fever. Examination of history discloses that the patient left England in March, 1892, for Gibraltar. He continued in good health until the autumn of that year, when he was attacked with continued fever, which, from its long duration (103 days in hospital) and from the fact that the patient was constipated throughout, may not unreasonably be assumed to have been Mediterranean fever. The patient left Gibraltar for India with his regiment in December, 1893, feeling perfectly well. In India he was noted as having suffered occasionally from attacks of fever. These attacks of fever were, however, not severe enough to require treatment in hospital. The patient began to suffer again from fever very soon after he was put under orders for home. His blood has been examined by us with negative results for malaria, and his urine has recently been examined by us with negative results both for the presence of typhoid and Malta fever micro-organisms. His serum exerts no influence upon the bacillus typhosus. It manifests, even in 1000-fold dilution, a very characteristic effect upon the micrococcus of Malta fever. It is obvious that the interpretation of the results of serum-diagnosis was here complicated by the fact that the patient has presumably suffered some four years ago from Malta fever, and that a reaction with the micrococcus of Malta fever might possibly have persisted for this period. In view, however, of the fact that the serum shows the specific reaction in such an enormous dilution, and, further, in view of the fact that four years have elapsed since he suffered from fever in Gibraltar, and lastly, in view of the fact that the patient is now suffering from pains in the joints, it seems to us practically certain that this patient is suffering from Malta fever.[4]

[3] Our experience with monkeys has shown us that the specific reaction to the micrococcus Melitensis is generally already present on the day after inoculation.

[4] The question of greatest clinical interest in connexion with this case is, of course, the question whether the patient was re-infected with Malta fever in India, or whether the attacks of fever from which he suffered at intervals in India were mere recrudescences of his original Malta fever. In view of the facts which one of us has, in conjunction

Having sufficiently illustrated this last point we may now subjoin in tabular form the results which we have obtained by the application of this method of serum diagnosis.

The results which are tabulated below were obtained by testing the reaction of the serum in the capillary servo-sedimentation pipettes which have been described and illustrated above.

*In the tables which are subjoined a voluminous sedimentation is indicated by the sign + ; a slighter but still perfectly characteristic sedimentation is indicated by the sign * ; a negative result is indicated by the sign* 0.

TABLE I.—*Cases Diagnosed as "Malta Fever" which showed Reaction on the Micrococcus Melitensis of Bruce.* [5]

No. of case.	Period elapsed since illness.		Degree in which serum was diluted.				
	Years.	Months	1 in 10.	1 in 25.	1 in 50.	1 in 100.	1 in 200.
1†	—	5	*	*	*	0	0
2‡	—	6	+	+	+	—	—
3	—	6	+	+	+	+	+
4	—	8	+	+	+	+	+
5	1	8	+	+	+	+	+
6‖	1	9	+	+	+	+	+
7	3	—	+	*	*	0	0
8§	Now ill.		+	+	+	+	+

† Said to have been a very slight attack.
‡ Higher dilutions not tried.
‖ Marked effect in this case up to 1 in 300.
§ Gives a positive reaction up to, but not above, a 1000-fold dilution.

TABLE II.—*Cases diagnosed "Typhoid Fever" which showed Reaction on Typhoid Bacillus.*

No. of case.	Period elapsed since illness.		Degree in which the Serum was diluted.				
	Years.	Months	1 in 10.	1 in 25.	1 in 50.	1 in 100.	1 in 200.
1	—	5	+	+	*	0	0
2	—	6	*	*	0	0	0
3	—	6	+	+	+	+	+
4†	—	6	+	+	+	—	—
5	—	6	*	*	0	0	0
6	—	7	*	*	0	0	0
7†	—	9	+	+	+	—	—
8	—	9	+	*	0	0	0
9	—	10	+	*	0	0	0
10	1	2	*	*	0	0	0
11	1	8	+	+	*	0	0
12	2	—	+	*	0	0	0
13†	6	—	+	+	—	—	—
14	6	—	+	*	0	0	0
15	12	—	*	*	0	0	0

† Higher dilutions not tried.

TABLE III.—*Cases diagnosed "Typhoid Fever" which had no effect on the Typhoid Bacillus, but showed a distinct Reaction on the Malta Fever Micrococcus.*

No. of case.	Place in which illness occurred.	Period elapsed since illness.		Degree to which the serum was diluted.				
		Years.	Months	1 in 10.	1 in 25.	1 in 50.	1 in 100.	1 in 200.
1	Aldershot.	—	9	+	+	+	+	+
2*	Sabathu, India.	—	7	+	+	+	+	+
3*†	Ditto.	—	7	+	—	—	—	—

* India was the only foreign station in which the patient had served.
† Higher dilutions not tried.

with Surgeon-Major Semple, elicited on the survival of the micrococcus Melitensis in the spleen of monkeys who have perfectly recovered from Malta fever, both these interpretations appear to us to be equally admissible.

[5] We are deeply indebted to Surgeon-Captain L. Hughes for sending us a culture of this micro-organism. The culture which was sent to us was obtained in Malta from a fatal case of the disease.

TABLE IV.—*Cases Diagnosed "Typhoid Fever" which showed no Reaction on either the Typhoid or Malta Fever Organism.*

No. of case.	Place in which illness occurred.	Period elapsed since illness.	
		Years.	Months.
1, 2, 3, and 4	Sabathu, India.	—	8, 8, 6, and 6
5	Nowshera, India.	—	7
6	Lucknow, India.	—	10
7	Line of march, India.	—	3
8	Rangoon, Burmah.	—	6
9	Shwebo, Burmah.	—	9
10	Cannanore, India.	—	10
11	Hong-Kong.	—	9
12	Benares, India.	—	8
13	Umballa, India.	—	6
14	Natal, South Africa.	17	—

TABLE V.—*Cases diagnosed "Malarial Fever," or not specifically diagnosed, which showed Reaction on the Malta Fever Organism.*

No. of case.	Place in which illness occurred.	Period elapsed since illness.		Sedimenting effect.				
		Years.	Months.	1 in 10.	1 in 25.	1 in 50.	1 in 100.	1 in 200.
1†	Nowshera, India	—	11	+	+	+	+	+
2	Hong-Kong.	—	6	*	*	0	0	0
3‡	Meean-Meer.	Now ill.		+	+	+	+	+

† India was the only foreign station in which the patient had served.
‡ Distinct effect up to 1000-fold dilution.

TABLE VI.—*Case diagnosed "Malta Fever" which showed no Reaction on the Micrococcus Melitensis, but which showed a Distinct Effect on the Typhoid Bacillus.*

No. of case.	Place in which illness occurred.	Period elapsed.		Degree to which the serum was diluted.				
		Years.	Months.	1 in 10.	1 in 25.	1 in 50.	1 in 100.	1 in 200.
1	Malta.	Ill at time of examination.		+	+	+	*	0

A not inconsiderable number of interesting facts are disclosed by a study of these tables. The following are perhaps the more important of these :—(1) Consideration of Table I. discloses the fact that the micrococcus Melitensis, which was discovered by Surgeon-Major D. Bruce, is in reality, as he asserted it to be, the true cause of Malta fever. Out of nine clinically more or less well-characterised cases which were examined by us, the eight which are tabulated here have shown a perfectly characteristic reaction to the micrococcus Melitensis. The only one of the nine cases which failed to react was that of a patient who had suffered from Malta fever five years previously to the date of our examination. We may not unreasonably surmise that the specific power of sedimenting the micro-organisms of Malta fever may, in this case, have passed away. (2) Consideration of Tables III. and V. discloses the fact that Malta fever is, as Bruce and others have long surmised, a disease which is not by any means confined to the Mediterranean basin. We have here what we take to be definite evidence of its existence in three stations in Northern India. We have, further, what we take to be probable evidence of its existence in Hong-Kong. (3) Table III. shows that a certain number of cases which are from their clinical symptoms diagnosed to be typhoid fever, are in reality cases of Malta fever. (4) Table IV. shows that a considerable number of cases which are from their clinical characters diagnosed to be typhoid are in all probability neither cases of typhoid fever nor cases of Malta fever. It is

possible that the fevers from which these particular patients suffered may have been malarious in character. It is also possible that these fevers may have belonged to some as yet undefined category of continued fever. What is important for us to note is the fact that any tropical fever which is unaccompanied by the presence of malaria parasites in the blood, and which can by the method of serum-diagnosis be shown to be neither typhoid fever nor Malta fever, is a fever which might very profitably be made the subject of bacteriological investigation. (5) Tables I. and II. show that the specific agglomerating and sedimenting power, which is acquired by the blood in cases of fever, persists in the blood for a considerable term of years. We have been able to demonstrate its existence in the blood in the case of typhoid fever after no less a period than twelve years. Similarly, we have been able to demonstrate its persistence in the blood for at least three years after an attack of Malta fever.

These facts are of the greatest importance, if, as was urged in a paper on Typhoid Vaccination [6] which was written by one of us in conjunction with Surgeon-Major D. Semple, the sedimenting and agglomerating power of the blood is in reality a true index of the condition of immunity.

Duration of the immunity against cholera which is conferred by undergoing either an anti-cholera inoculation or an attack of actual cholera.—With a view of further elucidating this question of the association of the sedimenting power of the blood with immunity we have recently examined the blood of one convalescent from (supposed) cholera, and further the blood of five patients who had submitted themselves to Mr. Haffkine's cholera inoculations. The results of these blood examinations are of a certain amount of interest, even though their interpretation is a matter of considerable difficulty and even though they have no very close relation with the question of immunity against septicæmias, such as typhoid fever and Malta fever.

TABLE VII.—*A Case Diagnosed "Cholera" and Cases of Cholera Vaccination which showed no Reaction on the Cholera Vibrio.*[7]

No. of case.	Place in which illness or vaccination occurred.	Period elapsed since illness.		Period elapsed since vaccination.		Result of the application of the serum test.
		Years.	Months.	Years.	Months.	
1	Poonah, India.	—	4	—	—	Absolutely negative.
2*	Dinapore, India.	—	—	2	—	"
3*	Poonah, India.	—	—	—	4	"
4†	Poonah, India.	—	—	—	4	"
5*	Ranikhet, India.	—	—	3	4	"
6*	Lucknow, India.	—	—	3	4	"

* Vaccinated in two operations. † Vaccinated in one operation only.

In conclusion we desire to advert to a possible application of the method of serum-diagnosis to the differentiation of the buboes which are due to syphilis or ordinary pyogenic micro-organisms, from the buboes which are due to the entrance of the plague bacillus into the body. Necessity for some such method of differentiation arises, first in connexion with the study of the geographical distribution of plague, and secondly in connexion with the early diagnosis of mild cases of plague. This question of the differential diagnosis of buboes seems to us to acquire a certain importance in view of the fact that one of us when Medical Officer of Health for Penang, had occasion to observe and to call attention to the increased number of non-venereal buboes which occurred in Penang very soon after the outbreak of the great epidemic of plague in Hong-Kong.

Netley.

[6] Vide Brit. Med. Jour., Jan. 30th, 1897.

[7] In view of the differences which exist between various varieties of cholera it is perhaps worth noting that the cholera with which we tested these bloods is a cholera which was kindly placed at our disposal by Professor Pfeiffer. It is a cholera which shows the perfectly characteristic agglomeration and sedimentation when it is treated with the serum of Pfeiffer's immunised goats.

ISOLATION HOSPITAL FOR BLANDFORD, DORSETSHIRE.—Lord Portman has promised £500 towards the erection of an isolation hospital for Blandford, and if necessary will also give the site.

REMARKS UPON VIRTUAL OR RELATIVE MITRAL STENOSIS.

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W. LEE DICKINSON, M.D. CANTAB., F.R.C.P. LOND.,
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THE object of this paper is to draw attention to an occasional state of the mitral valve in which there are all the anatomical characters of stenosis, but on so large a scale that stenosis does not actually exist. The segments are thickened and welded together, and perhaps depressed into the cavity of the ventricle so as to approach the form of a funnel. The passage, however, is absolutely as large as, or larger than, natural, though small in relation to the ventricle which is dilated. Clinically, the blowing murmur of mitral regurgitation is always present, and frequently also a more or less typical murmur of the kind called "presystolic." Upon first meeting with such a case post mortem the question naturally presents itself whether there had not been actual mitral stenosis, till, perhaps only at last, the valve became enlarged as the ventricle dilated. However, it is very improbable that a valve which has once attained an important degree of stenosis and rigidity can afterwards become uniformly enlarged. It is true we sometimes find that valves which obviously have been, and perhaps are still, stenosed have undergone a certain amount of widening from laceration of the segments or rupture of the chordæ tendineæ; but such lesions have generally been produced through the medium of ulceration, and although the ulceration was doubtless invited by strain it is not with such irregular deformities that we are dealing here. A more satisfactory explanation is that the valve, though naturally tending to stenosis, has been held open from the first by the dilatation of the ventricle. In all such cases the disease of the valve and the disease of the ventricle seem to have originated at or about the same time. Most of them are instances of adherent pericardium in young persons, a condition which, arising in the rheumatic pericarditis of childhood, is attended equally by dilatation of the ventricle and mitral endocarditis of that limited kind which, if free to pursue its natural course, would end in stenosis. In others there is aortic regurgitation, the dilatation of the ventricle resulting from which has evidently overtaken the mitral disease while the valve was yet pliant and extensile, even if the latter set in first. In one of our cases there was neither adherent pericardium nor aortic regurgitation, but the ventricle had been kept dilated by persistence of the same attack of rheumatism which caused the disease of the valve. Under such circumstances, where dilatation of the ventricle is the more acute and violent mischief, the state of the valve we are considering is clearly beneficial. The orifice being fully large does not directly obstruct the circulation in the lungs, while by tending to stenosis it moderates the mitral regurgitation which is always present in these cases and which is free in proportion as the valvular segments yield to the strain. It is preferable, therefore, to describe the condition as "relative" rather than "virtual" stenosis; the latter term would imply the effects as well as the resemblance of the actual thing. We append an abstract of three illustrative cases from among a dozen of the same kind of which we have taken clinical and post-mortem notes.

CASE 1.—The patient was a girl aged twenty years. She had been liable to palpitation for the last two years and œdema of the legs for six months. The impulse of the heart was extensive and turbulent. The apex was in the fifth left space far outside the nipple line. At the apex there was an early rough murmur, accompanied by a thrill, ending in a snap, and followed by a blowing systolic murmur. The patient died from pneumonia. At the necropsy the two layers of the pericardium were found to be completely united by old adhesions. The right auricle was dilated and the right ventricle hypertrophied. The tricuspid and pulmonary valves were healthy. The terminal branches of the pulmonary artery were atheromatous. The left auricle was greatly dilated and had partly compressed the left bronchus. The mitral orifice fairly admitted two fingers. The edges of the segments and the

chordæ tendineæ were thickened and the latter shortened, so that the valve appeared pulled down into the ventricle somewhat in the form of a funnel. The left ventricle was hypertrophied and greatly dilated. The myocardium and the aortic valves were healthy.

CASE 2.—The patient was a man aged twenty-nine years. He had had rheumatism twelve years before and œdema and dyspnœa for the last six months. He suffered from angina. At the apex of the heart a rumbling diastolic murmur and blowing systolic murmur were heard. There was a double murmur on the sternum. At the necropsy the pericardium was found to be normal. The heart weighed thirty-four ounces. The right side was small. The left auricle was thickened. The mitral orifice nearly admitted three fingers, but from the thickening and welding together of the cusps it appeared to have been at one time stenosed and subsequently opened out by the dilatation of the left ventricle. The chordæ tendineæ were thickened and some of those belonging to the anterior cusp were eroded. This cusp showed an incipient aneurysm. The left ventricle was greatly dilated and hypertrophied. The myocardium was fatty. The aortic valves were sclerosed and incompetent; there were a few vegetations.

CASE 3.—The patient was a woman aged twenty-seven years. She had suffered much from rheumatism of late years. She had had cardiac symptoms for the last five months. The apex of the heart was in the fifth left space, five inches from the middle line. There was a short "presystolic" and loud systolic mitral murmur. She died cyanosed, with thrombosis of the axillary vein. At the necropsy the pericardium was found to be normal. The heart weighed twenty ounces. The right auricle was dilated and the appendix thrombosed. The tricuspid orifice was dilated and the segments were thickened. The pulmonary artery was atheromatous and contained some thrombi. There were pulmonary apoplexies in both lungs. The left auricle was dilated and hypertrophied. The mitral orifice admitted two fingers, but gave the impression of having been smaller, the segments being greatly thickened and retracted into the ventricle by shortening of the chordæ tendineæ. The myocardium was swollen. The aortic valves were healthy.

A SUCCESSFUL CASE OF CÆSAREAN SECTION IN A COTTAGE.

BY SIDNEY A. BONTOR, M.D., M.S. DURH.

THE question of what should be done when a child cannot for any reason be delivered per vias naturales is a sufficiently difficult one for the practitioner in towns where specially skilled assistance is available and where special institutions exist for the treatment of such cases; but it is even more serious and difficult for the country medical man far removed from aids of this description and who must depend upon his own resources; and the following case, in which both mother and child were saved and which occurred in a country cottage under considerable difficulties—e.g., a levy had to be made on the neighbours to obtain sufficient utensils, &c.—is offered as a contribution to the subject.

The patient was a woman aged thirty-four years. Labour commenced at the full term about noon on Dec. 4th, and the "waters broke" about 7 P.M. on that day; the pains were slight, and occurred at rather long intervals. She continued thus until the morning of Dec. 6th, when the cervix was found to be fully dilated, but the uterine contractions were exerting no expulsive force upon the fœtus; there was a considerable caput succedaneum. Chloroform was administered and the forceps applied, but although considerable force was exerted the child did not advance. The forceps were then removed and re-applied, but the result was as before; so further attempts at delivery in this manner were abandoned, and I consulted with my friends, Dr. King and Mr. McBride, as to the best method of procedure, and after considering the case from all points we decided to advise the Cæsarean section, and to this the husband consented after having the alternative methods explained to him. The patient being already under chloroform the necessary arrangements had to be rapidly made. We had a considerable quantity of water boiled and stored for use in clean jugs, and while I selected and boiled my instruments Dr. King prepared the patient by washing the thighs, abdomen, &c., with ether and soap and water, and then applying a compress wrung out of a 1 in 1000 solution of perchloride of mercury; he then passed a catheter and gave a vaginal injection of a similar solution and applied a like compress over the vaginal orifice. The operation was then performed, Dr. King assisting and Mr. McBride continuing the anæsthetic. An incision about five inches long was made in the linea alba from about one inch above the umbilicus to two inches above the pubes, the bleeding points secured, and the peritoneum opened throughout the length of the wound. The uterus being thus exposed, Dr. King pressed the edges of the abdominal opening firmly against the uterus without extruding it, but in such a manner that fluids from the uterus could not pass into the peritoneal cavity nor bowel escape from the abdomen. A short incision was then made through the uterine wall down to the membrane and extended upwards and downwards by scissors on the finger as director to about four and a half inches in length; the membranes were then divided and the child extracted. The placenta was easily removed and the uterus contracted well; as it did so Dr. King squeezed the abdominal wall against it so as to extrude it for facility of suturing, and at the same time, by keeping the edges of the abdominal opening pressed together behind it, fairly closed the abdominal cavity; the uterus was then lightly sponged with sublimate lotion and sutured with seven deep and five half deep sutures of silkworm gut, the edges of the wound being thus brought into excellent apposition; it was then once more sponged and returned into the abdominal cavity. The deep sutures were so inserted that while they embraced the whole thickness of the muscular wall they avoided the decidua, and were placed at sufficient distance from the edge of the wound to avoid cutting out. The peritoneal cavity was flushed with plain boiled water, and the wound closed with interrupted sutures of silkworm gut, dusted with boracic acid, and dressed with cyanide gauze, covered with sal-alembroth wool, and kept in position by strapping. No drainage tube was used. The patient had some slight pain that night, for which an injection of a quarter of a grain of morphia was given, but beyond this there is little to add. Both mother and child made excellent progress, and there was not a single unfavourable symptom; the lochia passed freely, and were not excessive; the temperature did not rise above 99·4°; the pulse was good, and the tongue moist and clean throughout; the wound was dressed on the sixth day, and was found completely healed. The patient was nursed by the ordinary monthly nurse, who had never seen a surgical operation before.

Great Berkhamsted.

A CASE OF TRAUMATIC INTRA-THORACIC RUPTURE OF THE TRACHEA WITHOUT FRACTURE OF THE CHEST WALL.

BY SURGEON-LIEUTENANT CLAYTON A. LANE, M.D. LOND., I.M.S.,
LATE HOUSE SURGEON TO ST. MARY'S HOSPITAL.

A RAILWAY-VAN GUARD, aged fourteen years, was brought to St. Mary's Hospital on May 4th, 1895, having twenty minutes earlier had his chest crushed between a heavy van and an iron-edged platform. So far as was known his head was not injured. When seen he lay crying out wildly, but answering no questions; he threw his right arm and leg about freely and repeatedly, but did not move his left limbs at all; his face he distorted by grimaces and both sides of it moved equally. There were no signs of injury about the head or on the chest. No broken ribs were discovered, and though the chest was tender to the touch its movement and resonance were normal. Loud rhonchi were heard all over both lungs, rendering completely inaudible the heart sounds. The pulse was feeble; the abdominal organs were normal. The patient had been perfectly well, without cough, up to the time of the accident. At midnight he was very restless, took but little notice of his surroundings, and was somewhat blue with orthopnœa. There was more movement of the left limbs. He had

surgical emphysema of the left side of the upper part of the chest and of the left side of the neck and face as high as the supra-orbital ridge, so that the left eye was partly closed by the emphysematous swelling. No bony crepitus could be made out after a further search in the chest. On percussion the chest was found to be normal except for a hyper-resonant note inside the left nipple. Coarse crepitations were heard with inspiration and expiration all over the chest, and during a pause in breathing fine crackling was heard over the heart and the presence of emphysema of the mediastinum inferred from this sign. There was no expectoration. The pulse-rate was 120 per minute, and the wave very easily compressible. The patient looked so ill that it seemed unlikely that he would live till morning. He was ordered a canopy and steam kettle, and half an ounce of brandy every three hours. Next morning (May 5th) he was more conscious and could feed himself when a cup of milk was put in his hand. He was cyanosed, with a respiratory rate of 44 per minute; the alæ nasi were working, and there was inspiratory recession of the lower intercostal spaces. There was marked rattling uniformly heard all over the chest and evidently originating in the larynx or trachea; no evidence of fluid or air in either pleural cavity was to be obtained. The pulse-rate remained at 120. In the evening there was inspiratory recession of the lower part of the thorax on each side, and less crepitation in the chest, so that the entry of air was evidently less. The respirations were 50, the pulse rate 144, the temperature 103·8°, and the surgical emphysema and left-sided weakness were unchanged. The patient passed a restless night, but next day was quieter, the pulse-rate being 180; the respirations gradually increased to 72 per minute, the temperature rose to 106°, and he became more cyanosed and died at 3·30 P.M. from asphyxia.

At the post-mortem examination the cranium and its contents were found to be normal except for congestion; there was no bruising of the scalp, no intracranial hæmorrhage or embolism, and no softening, though there was some flattening of the convolutions, especially of the right side. No fracture of the ribs or of the sternum was present, nor was there any dislocation of the rib cartilages or of the clavicles. There were ecchymosis and surgical emphysema of the mediastinum and parietal pericardium, and ecchymosis on the posterior surface of the heart, the valves of which were normal. Extending upwards vertically for two inches from the bifurcation of the trachea a rent separated the tracheal rings from the soft posterior wall on the right side, and was, therefore, intra-thoracic. Surrounding this rent was an abscess lying outside the trachea. The bronchi contained pus; the lungs were congested with a few patches of pneumonia; there was no air nor fluid in the pleural cavity; the abdomen was normal.

I am indebted to Mr. Page for permission to publish this case.

Devon.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION.—At a meeting of the Council held on Feb. 23rd Mr. D. B. Balding, F.R.C.S. Eng., chairman of council, presided. Dr. W. Gayton was elected treasurer, in the place of Mr. C. M. Frost; Mr. Arthur Greenwood hon. secretary, in the place of Mr. J. W. Barnes; and Mr. F. H. Oliver auditor, in the place of Dr. W. Smith. The office of the association was changed from 3, Bolt-court, Fleet-street, to 9, Copthall-avenue, London-wall, E.C., the offices of Messrs. Beckingsale and Co., solicitors to the association. It was unanimously resolved that the passing of the Poor-law Officers' Superannuation Act had by no means rendered the further existence of this society unnecessary, and that it was highly desirable that the Poor-law medical officers of England and Wales should still have an association to watch over and protect when necessary their special interests in the somewhat serious differences which of necessity occasionally arise between them and the various boards under which they hold office. Application was made by several public vaccinators that counsel's opinion should be taken respecting the legal position of those officers under the recent Superannuation Act, and after some discussion it was resolved that one-third of the cost of putting a case before some eminent counsel should be defrayed by the association if the remainder were subscribed by those of the class interested.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

RECOVERY AFTER TAKING 1 OZ. OF CHLORODYNE AND 250 GRAINS OF SULPHONAL.

BY KEITH CAMPBELL, M.B. EDIN.,
ASSISTANT PHYSICIAN TO JAMES MURRAY'S ROYAL ASYLUM, PERTH.

A MAN was lately admitted to this asylum who had for months suffered from insomnia, for which he had got sleeping draughts containing chloral hydrate. Owing to business anxiety the insomnia got much worse and his general health broke down. His power of self-control was also diminished. He went on a visit to a relation at the seaside, and on Jan. 11th, 1897, he took the boat to a neighbouring watering-place, where he bought an ounce bottle of chlorodyne. He went on board the next boat and took the whole of this. He got off at the next stopping place and bought at two separate druggists two bottles of sulphonal tabloids, each containing twenty-five tabloids with five grains of sulphonal. He had thus 250 grains of sulphonal in his possession. He was now feeling dazed and utterly reckless, and he went to an hotel, took a bedroom, and ordered hot water to be sent up. He mixed and took the whole of the sulphonal. This was in the afternoon of a Monday. He remembers nothing more till the morning of the following Thursday, when he had some breakfast. It was afternoon, however, before he could give directions for a telegram to be sent to his friends, under whose care he went home next day. From Sunday night till next Thursday morning he had just one cup of bovril. On admission as a voluntary patient on the following Monday he was in a state of nervous breakdown, restless, unable to sustain any effort, querulous, and irritable. He looked ill and worn. There was considerable gastric catarrh, and his urine contained a large amount of sugar. His pupils were unequal. He is an undersized man with a highly neurotic family history. In a week, under appropriate treatment and diet, the sugar disappeared, and his general health is now very fair.

Two cases of larger doses of sulphonal have been recorded. The first case was when thirty grammes (463 grains) were taken, causing 114 hours' sleep with a short interval, no bad effects resulting.[1] In the second case, reported in THE LANCET by a Berlin correspondent, the same dose was taken by a workman, who slept thirty hours and after a short interval twenty hours. In neither case was any other drug taken. In the present case the drugs were bought at three different druggists in two towns in which the patient was a stranger, so that it is almost impossible to check the facts. The patient was perfectly frank about it, however, and related the whole circumstances clearly and without any bravado. At the time of taking the drugs he had no idea of what quantity he was taking; he only knew it was a large dose. Short of absolute certainty, there is every reason to believe that his statements are quite reliable.

Perth.

A CASE OF RUPTURED UTERUS.

BY PTOLEMY A. COLMER, M.R.C.S. ENG., L.R.C.P. LOND., L.S.A.,
HON. SURGEON TO THE YEOVIL DISTRICT HOSPITAL.

I WAS called at 10 P.M. on Jan. 28th to attend a very stout woman, aged forty years, in her fifteenth confinement. I found the os about the size of a five shilling piece, with head presenting, the membranes ruptured, and pains occurring about every seven or eight minutes but not sharp. The patient was up and walking about, in fact, she told me I was not wanted yet. I left, giving instructions to call me again when the pains became frequent and more severe. I was

[1] THE LANCET, May 4th, 1889, p. 915.

called again at 3 A.M. on the 29th, and on entering the room noticed how ill the patient (who was now in bed) looked. On examination I found the chin caught on the perineum and with very slight traction, with the finger in the mouth it easily slipped out, and with a little more traction the rest of the body of a fine male child in a very advanced state of putrefaction was born. The placenta was easily expelled with a large clot. The uterus contracted well and there was very little hæmorrhage. The patient now began to complain of faintness, but no pain. Her pulse was quick and extremely feeble, and she had an anxious expression. I kept my hand on the uterus which appeared to keep well contracted and there was very little hæmorrhage. About 4.20 A.M. she seemed to rally, her pulse improved and she expressed herself as feeling better, but a quarter of an hour later the pulse became quicker and smaller and the breathing hurried and shallow. The patient, who showed extreme restlessness now began to get blanched and at about 5 10 A.M. she died. Immediately after death on introducing my hand into the uterus (which had just become flabby) I found coils of intestines and blood clots and could even feel the liver. No post-mortem examination was allowed. I may add that out of her fifteen confinements the patient had had only three natural ones, the rest being instrumental; one or two had been transverse and several had been breech presentations. There appeared to be no pelvic contraction. This case illustrates how obscure the symptoms of rupture of the uterus may be, as I was quite unable to find anything to account for her extreme prostration until the ast moments of life.

Yeovil.

NOTE ON A CASE OF LICHEN PLANUS CURIOUSLY AFFECTING SCRATCHES.

By R. W. INNES SMITH, M.B. EDIN.,
LATE RESIDENT ASSISTANT MEDICAL OFFICER, ANCOATS HOSPITAL, MANCHESTER.

ON Feb. 13th I saw a woman, aged thirty-eight years, married but having no family, who complained of an eruption on the wrists, backs of the hands, the forearms, and the front of the right thigh. The eruption was generally typical of lichen planus. It consisted of discrete papules, the surfaces of which were flattened and often glazed. In some places the papules had run together, forming thickened patches with a small amount of scaling. There was some itching, but the patient complained more of a "tingling" sensation, especially when the papules were in their early stage. The eruption was first noticed by the patient last December on the inner aspect of one wrist. The curious point of this case, however, was that in places where the skin had been scratched each scratch had taken on the type of the eruption, and thus appeared as a raised, reddish, polished "line," composed of papules running together. Thus on first looking at the case these "lines" appeared as the more important part of the lesion, but from their general arrangement were easily recognised as the positions of old scratches. A further point in the case was that after a scratch was inflicted it seemed to heal in the usual way, leaving, however, a faint line, which was best seen on putting the skin on the stretch, this "line" gradually becoming developed into the condition described above.

The cause seems difficult of explanation. The patient herself traces the first affection of the scratches to "washing a cat which had skin disease," the animal retaliating by scratching her forearms and hands severely. This happened some weeks after the first appearance of the rash. It seems, however, to be merely a coincidence, as undoubtedly many of the scratches are the patient's own production. Possibly there is a parasitic element in the disease which would explain this peculiar affection of the scratches.

Duncan-terrace, N.

HEALTH OF LLANDRINDOD WELLS.—At the last monthly meeting of the Llandrindod Wells urban district council Mr. F. H. Roberts, the medical officer of health, presented his annual report for 1896, from which it appeared that the death-rate had been 8·27 per 1000 and the birth-rate 26·3 per 1000. Mr. Roberts referred approvingly to the sewerage extension scheme now contemplated at a cost of £6000, and to the electric light installation which is being laid down.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procœmium.

MIDDLESEX HOSPITAL.

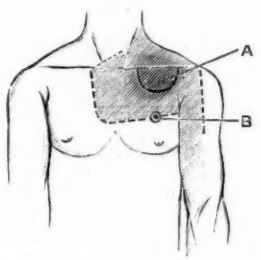
BULLET LODGED BEHIND THE CLAVICLE DETECTED BY MEANS OF THE ROENTGEN RAYS, AND CAUSING SYMPTOMS LIKE THOSE OF ARTERIO-VENOUS ANEURYSM.

(Under the care of Mr. HENRY MORRIS.)

FOR the notes of this case we are indebted to Mr. W. D. Perry, house surgeon.

The patient, a young man aged twenty years, was admitted to the Middlesex Hospital on May 11th, 1896, with a self-inflicted wound from a revolver bullet on the left side of the chest. On admission he had lost a large quantity of blood and was in a very collapsed condition. The bullet had entered at the upper border of the third rib three inches from the left border of the sternum and had then apparently passed upwards and inwards towards the root of the neck, but it could not be felt. Hæmorrhage had ceased when he was brought to the hospital, but there was a large quantity of blood effused beneath the pectoral muscles. No pulsation could be felt in the left radial and axillary arteries. On placing a stethoscope over the upper part of the chest on the left side there could be heard a loud roaring bruit, which was rather louder during the heart's systole, but continuous throughout diastole. It was most distinct at a point half an inch below the clavicle and two and a half inches from the left border of the sternum, and could be traced upwards into the supra-clavicular fossa, inwards across the chest to the right border of the sternum, and outwards along the line of the axillary and brachial arteries to a point midway between the shoulder and the elbow-joint, and more faintly even down to the elbow. (See diagram, Fig. 1.) It could be heard

FIG. 1.

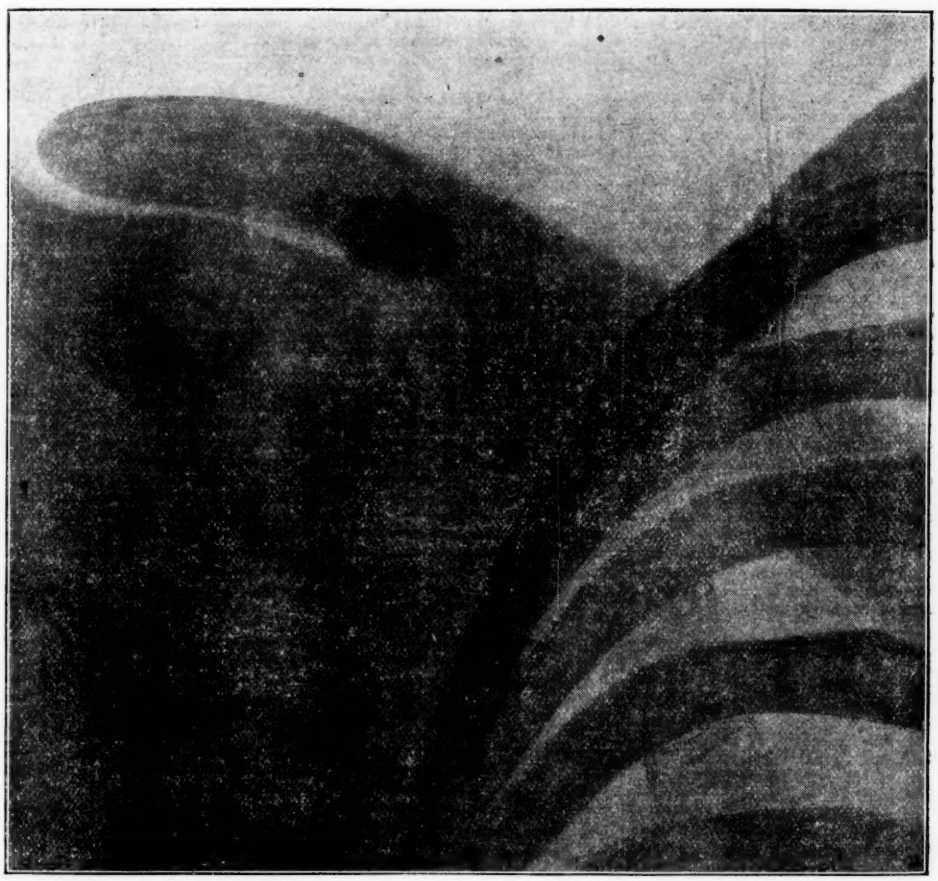


A, Point where bruit was loudest. B, Point of entrance of bullet. The bruit was heard over the whole of the shaded area.

on the chest above a line drawn transversely from the wound, but not below it, and disappeared entirely when the subclavian artery was compressed. Shortly after admission the hæmorrhage re-commenced and was so severe as to lead one to think that the subclavian artery had been wounded. However, after compressing the proximal side of the subclavian artery the hæmorrhage ceased. About two hours after the injury was inflicted the patient was placed under an anæsthetic and an attempt was made to find and extract the bullet, but without success. The wound was enlarged and the track searched both by means of bullet-searchers and the little finger. The loud, roaring, and rasping bruit pointed to some injury to the subclavian vessels, and was very similar, indeed, to the sound produced when a communication between artery and vein exists. Whilst under the anæsthetic a feeble pulsation in

the artery at the wrist was felt. Under treatment the wound healed rapidly, and though there was a numbed feeling in the second and third fingers of the left hand, which only lasted for two days, no symptoms of importance developed. The pulse in the left radial artery began to return shortly after admission, and a fortnight later was quite distinct but feebler than the pulse at the right wrist. During the month succeeding admission the patient complained of attacks of pain shooting down the left arm, but not traceable along the course of any of the large nerve trunks. After the wound had healed and the patient had become convalescent several attempts were made to localise the bullet by means of the Roentgen rays, and on July 3rd a very satisfactory photographic negative was obtained. (See Fig. 2) This showed the bullet to be lodged exactly behind the clavicle, about one and a half inches from the acromio-clavicular joint. At this time the condition of the bruit above mentioned was much the same as before. The left radial pulse was distinctly weaker than the right, but synchronous with it. There was no impairment of sensation in any of the fingers. On the 8th the patient was anæsthetised, and an incision made along the upper border of the clavicle about three inches in length, the outer end reaching to the inner margin of the clavicular attachment of the trapezius muscle. A careful dissection was made behind the clavicle, and the bullet felt lying rather beyond the outer end of the incision behind and below the edge of the trapezius. The incision was prolonged outwards for half an inch and a few fibres of the aforesaid muscle were divided, which enabled the bullet to be extracted without difficulty. (Fig. 3.) The wound healed by first intention, and the patient left the hospital on July 21st quite well. The bruit, however, had not altered in character, and the difference in the radial pulses was as marked as before. On July 31st the patient was again seen. The bruit was much the same as before, but very little difference could then be detected in the size of the pulses in the radial arteries of the two sides. No œdema, coldness, or numbness of the left forearm and hand had been observed nor any distension of the veins of the limb. With the persistence of the loud bruit and the similarity of it to that heard in cases of aneurysmal varix one was led to expect the development of some aneurysmal condition in the future. As the patient is not now living in England, it has not been possible to make an examination of his present condition, but a relative informs us to-day (Feb. 26th, 1897) that he has recently married, has never been in better health than he is now, that during the late summer and autumn he was rowing on a river, and all the present winter has been carrying on his business. There is, therefore, every reason to believe that there does not exist a direct communication, even of small size, between the artery and vein.

FIG. 2.



View of upper part of chest and front of shoulder showing the bullet in position in the body.

FIG. 3

Exact size and shape of bullet after extraction.

MISSION HOSPITAL, KASHMIR.

A CASE OF RENAL IRRITATION SIMULATING CALCULUS OF THE KIDNEY CURED BY NEPHROTOMY.

(Under the care of Dr. ERNEST F. NEVE.)

MOST surgeons of experience have met with cases in which renal pain was thought to be due to calculus, where subsequent operation has relieved the symptoms for which treatment was sought, but has not shown the presence of a stone. In some instances no stone has been found, although it was present, in consequence of imperfect search; the stone has been small and placed in the substance of the kidney, or it has been fixed in a deeply lying calyx. Careful and systematic search is required, but we have seen a small calculus escape detection altogether by skilled hands until the kidney was fully incised after nephrectomy. Mr. Greig Smith[1] puts the proportion of failures to find a stone as one-fifth of the operations undertaken for the purpose of nephrolithotomy. Mr. Jacobson[2] gives the following list of the chief conditions which simulate renal calculus: (1) lithiasis; (2) tuberculous kidney; (3) slight pyelitis; (4) moveable kidney; (5) aching kidney; (6) nephralgias due to disease in parts adjacent to the kidney; (7) gall-stones retained in the gall-bladder; (8) spinal disease; (9) interstitial shrinking nephritis; and (10) new growth of kidney in its early stage. It is, however, only necessary to mention most of these to prevent anyone exercising ordinary care, from making a mistake in diagnosis.

A native, aged forty years, had complained for three years of periodical attacks of severe renal pain. His general condition was good. The urine was loaded with oxalate crystals and showed traces of pus. There was distinct but slight tenderness on pressure over the right kidney. On Oct. 7th, 1895, I made an incision four inches long almost horizontally backward from the tip of the last rib. Displacing the ascending colon and peritoneum forwards, the kidney was found after some searching, and was exposed by scraping through the fat with the finger. No stone could be detected on palpation. There was a little doubt as to whether, on needling, a slightly gritty-feeling area was traversed. On incising the pelvis and sounding systematically there was no sign of stone. The renal wound was stitched, also that in the loin, a drainage-tube of small calibre being left in. This was gradually shortened, and finally removed on the twenty-second day. The patient was dismissed on May 1st, 1896, free from pain, having had no return of his old symptoms.

[1] Abdominal Surgery, vol. ii.
[2] Jacobson: The Operations of Surgery, second edition, p. 705.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Annual Meeting.

THE annual general meeting of this society was held on March 1st, the President, Dr. HOWSHIP DICKINSON, being in the chair.

The report of the Council was read. The report showed the flourishing state of the society, a record number of forty-eight Fellows having been elected during the year. The death roll had also been unusually heavy, twenty-five Fellows having died during the twelve months. The arrangements for converting the original 4 per cent. debenture loan into 3 per cent debentures had been satisfactorily accomplished, and would result in a saving to the society of about £350 per annum.—After some remarks by Mr. T. HOLMES and Dr. THEODORE WILLIAMS the report was adopted.

The PRESIDENT, in his annual address, referred with satisfaction to the success of the conversion of the loan. The dinner at the Hotel Cecil, which is a new departure, had been a success, and he hoped that it would become an annual institution. The customary obituary notices of deceased Fellows closed the address, special reference being made to the lives of Professor Du Bois Reymond, Sir J. Russell Reynolds, Sir George Humphry, Sir George Johnson, and Mr. George D. Pollock.

After the usual votes of thanks had been passed the officers and council were elected to serve during the ensuing year. The following list was chosen: President: William Howship Dickinson, M.D. Vice-Presidents: William Marcet, M.D., F.R.S.; James Edward Pollock, M.D.; Frederick James Gant; and Charles Sissmore Tomes, F.R.S. Honorary treasurers: William Selby Church, M.D., and J. Warrington Haward. Honorary secretaries: Norman Moore, M.D., and Robert William Parker. Honorary librarians: Samuel Jones Gee, M.D., and Rickman J. Godlee, M.S. Members of Council: John Abercrombie, M.D.; Robert Leamon Bowles, M.D.; John Mitchell Bruce, M.D.; David Ferrier, M.D., F.R.S.; Joseph Arderne Ormerod, M.D.; William Watson Cheyne, F.R.S.; Henry Hugh Clutton; Frederick S. Eve; William Appleton Meredith; and Robert Alexander Gibbons, M.D.

PATHOLOGICAL SOCIETY OF LONDON.

Exhibition of Cases and Specimens.—Epithelioma of the Penis.—Changes in the Sub-maxillary Gland Secondary to Cancer of the Mouth.

A MEETING of this society was held on March 2nd, Mr. BUTLIN, the President, being in the chair.

Dr. F. J. SMITH and Mr. J. H. TARGETT showed a case of Aneurysm of the Aorta in a boy eight years of age. There was practically no history, the boy having been suddenly seized with dyspnœa only a few hours before his death, which occurred almost immediately after his admission to hospital. Post mortem a sacculated aneurysm the size of an orange was found projecting backwards from the upper part of the descending arch of the aorta and pressing on the œsophagus. The heart and œsophagus were perfectly free from disease, and to the naked eye the inner coat of the aorta was not degenerated. There was, however, a stenosis of the aorta, apparently congenital, just beyond the origin of the left subclavian artery; but as this was on the cardiac side of the aneurysm it was not easy to see what part the stricture could have played in the formation of the aneurysm.—At the suggestion of the PRESIDENT the specimen was referred to the morbid growths committee.

Dr. CYRIL OGLE showed a specimen of Dermoid Growth with Invasion of the Lung. The specimen was removed from the body of a man, twenty-eight years of age, who died from profuse hæmoptysis. He had suffered intermittently from cough and hæmoptysis for five years. On admission the temperature was hectic and the expectoration fœtid, the physical signs suggesting empyema. At the necropsy a cavity about four inches in diameter was found in the lower lobe of the right lung, which communicated freely with the middle primary division of the bronchus. It contained: (1) offensive grumous pus; (2) cheesy material, evidently sebaceous; and (3) five or six cream-coloured bodies like swollen digits, flabby, and covered with skin and fine hairs. Their attached ends were fused together into a firm mass which could be traced through the wall of the cyst, and was continuous with a mass which reached forward into the anterior mediastinum. Embedded in the central core was a large tooth. A microscopic section of one of the tongue-like processes showed a covering of stratified epithelium over a stroma of fibrous tissue containing some fat cells. There was evidence of inflammation near the surface only.—Mr. GODLEE said that these rare tumours did not appear to give rise to symptoms till adult life, and that then the symptoms were often those of empyema, and a purulent effusion did occur. In a case he had observed the symptoms began acutely in adult life, with expectoration of pus containing a few hairs. A few years later an incision was made into the cavity, which contained the same finger-like processes and some long hairs. The cyst was lined by a membrane exactly similar to that covering the digitations. In another case the symptoms commenced suddenly with a pleural effusion, at first serous and afterwards bloody. Later a tumour formed at the ensiform cartilage, and an incision liberated thick brown pus and greasy matter, possibly sebaceous. The wound ultimately healed, but later a fresh sinus formed near the clavicle and discharged for some time, but at length closed.

Mr. HUTCHINSON and Mr. E. FRAZER read a paper, with lantern demonstration, on Epithelioma of the Penis. They

pointed out that the clinical features of different forms varied considerably, and that several varieties might be distinguished. Of these the chief were—(1) the warty or papillomatous form; (2) the fungating form; (3) the flat disc or indurated ulcer; (4) the purely eroding or destructive form; and (5) carcinoma of the urethra. In the usual varieties starting on the glans penis, or inner aspect of the prepuce, it was shown that, however extensive the growth was, the urethra and corpora cavernosa were but rarely invaded, and hence the deduction was made that amputation at the root of the penis by the Thiersch-Gould method was only indicated in exceptional cases. Microscopically the malignant growths of the penis were shown to differ as greatly as the naked-eye appearances. The large squamous-celled epithelioma with cell-nests is the commonest; another variety is the large alveolar type without cell-nests, a third the small alveolar with tendency to assume a tubular appearance, and as a rare occurrence a small-celled carcinoma starting in the urethra. Evidence was adduced in favour of the belief that the last named might start in the glands opening into the fossa navicularis, &c. The frequent occurrence of cyst-like spaces, lined with smooth epithelial walls and containing leucocytes and free, swollen, epithelial cells, was illustrated from six different cases of epithelioma of the penis, and their origin was discussed. Such cyst-like spaces in the epithelial down-growths were found in cancer of the vulva sometimes, and comparatively rarely in epitheliomata of other parts of the body.—The PRESIDENT said that the malignancy of epithelioma of the penis did not rank high. He agreed that complete ablation was not necessary unless there was direct involvement of the parts at the root.—Mr. TARGETT thought that the cystic changes which had been described occurred in other parts besides the penis—as, for instance, in epithelioma of the gum. The surrounding inflammation was due to septic infection with pyogenic organisms.—Mr. SHATTOCK was also familiar with cyst formation in squamous epithelioma in other parts. In his cases the cysts were found to be due to degeneration of the cells themselves, and there were no signs of inflammation. He agreed that involvement of the corpora cavernosa was very rare, but there was one specimen in the museum of St. Thomas's Hospital in which there was quite a horny mass in the corpora cavernosa.

Mr. J. HUTCHINSON, jun., and Mr. E. FRAZER exhibited specimens of Inflammatory Changes in the Sub-maxillary Gland occurring with Epithelioma of the Tongue and Floor of the Mouth. Part or the whole of the gland may become replaced by fibrous tissue and lymphoid cells, the alveoli of the gland undergoing atrophy and largely disappearing. These changes are perhaps due to irritation of the gland from pressure on Wharton's duct, and are of clinical interest from the induration which they cause being liable to be mistaken for secondary deposits of the growth. The actual invasion of the salivary gland by deposits of epithelioma in the lymphatics in the former was also discussed.—Mr. CECIL BEADLES said that he had examined seventeen specimens of sub-maxillary gland from cases of cancer of the mouth. In only one was the enlargement found to be due to actual epitheliomatous deposit.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A CLINICAL meeting of this society was held on Feb. 26th, the President, Dr. BUZZARD, being in the chair.

Dr. SAMUEL WEST showed a case of Unusual Syphilitic Eruption in an Infant. The child was in good health till she was eight months old. She then had a number of concentric patches on both cheeks, which began as circular spots and spread at the periphery. She had a group of condylomata at the anus, and there was also a general lichenous eruption which had probably no connexion with the other skin lesions. The patches increased in size for a time, but ultimately healed without leaving a scar. Fresh patches appeared while the child was under treatment, and pursued a similar course to the older ones. He thought it was a rare case of syphilitic eruption, although there was not much direct evidence of its specific nature. An exactly similar case was figured by Hutchinson in his Atlas.

Dr. COUPLAND showed a young man with Multiple Neuromata, Osseous Growth of the Frontal Bone, and Nervous Symptoms of doubtful origin. The neuromata were of varying size, fifteen in number, and situated in the subcutaneous tissues of the arms and trunk, the largest being about three inches long. They had been noticed since he was ten years of age. The osseous growth projected from the left side of the frontal bone and had been growing for the last three years. During the last twelve months curious nervous symptoms had shown themselves. There were loss of memory and some general mental alteration, a curious high-pitched voice, staggering gait, total deafness of the left ear, some weakness of the left arm and left side of the face, and double optic neuritis. There was also proptosis of the right eye, which was probably due to the high degree of myopia present (−15 D). He had difficulty in deciding whether the nervous symptoms were due to neuromata involving the cranial nerves and spinal roots or were associated with the tumour of the frontal bone.

Dr. F. PARKES WEBER showed a case of Aortic Stenosis with Bradycardia. The patient was a young man suffering from persistent dyspnœa and syncopal attacks. For some months there was a systolic aortic murmur only, but during the last few days a diastolic murmur had developed. The pulse-rate was persistently slow. The aortic dulness was higher on the right side than the left, but he thought that this was due to general enlargement of the right side of the heart rather than to an aneurysm. There was a history of syphilis many years ago, but the symptoms came on rather suddenly soon after an injury.—Dr. ORMEROD referred to a case of Aortic Stenosis in which a diastolic murmur appeared after the patient had been under observation for many months.—Dr. S. WEST mentioned the case of a man, thirty-five years of age, with signs of Aortic Stenosis and whose pulse-rate was seldom over thirty. He was under observation for several years and did not develop a diastolic murmur.—Dr. A. MORISON said that in cases where there was bradycardia there was usually good compensation; and dyspnœa, such as this patient showed, was very unusual in association with it.

Dr. ALBERT WILSON showed a girl, fifteen years of age, who exhibited Dual States of Consciousness. The case was exhibited before the society a year ago. The symptoms had followed an attack of what was believed to be meningitis attended with maniacal excitement. In her normal state she was bright and intelligent, in the abnormal stage she was semi-imbecile and infantile in her ways and her mode of expressing herself, and appeared to be almost blind, although there were no ophthalmoscopic changes. During this abnormal period she showed some capacity for drawing, although she had none in her normal state. She passed abruptly by turns from one stage to the other, and when in the normal condition had no recollection of the events which had happened in the abnormal stage.

Dr. ST. CLAIR THOMSON showed a man, thirty-three years of age, with a Hæmatoma of the Antihelix of the left Auricle which had developed spontaneously. It subsided without the scarring that was usual in insane cases. He exhibited a photograph of an ancient bronze statue of a pugilist armed with a cestus whose ears showed signs of many hæmatomata.—The PRESIDENT pointed out that there were no signs of general paralysis, the pupils being equal and reacting normally, and the knee-jerks were not exaggerated.

Dr. BEZLY THORNE showed a case of Aneurysm of the Aorta treated by mineral baths, graduated walking exercises, and free ingestion of fluids. When he commenced treatment in November, 1896, the patient had increased cardiac dulness, tumultuous action of the heart, and great dyspnœa on the slightest exertion. After six weeks he could walk with comfort. The apex beat was one and a half inches nearer the sternum, but there was not much diminution in the dulness to the right of the sternum. A skiagraph showing the outline of the aneurysm was made by Dr. Campbell Thomson before and after the treatment, and showed that in spite of the exercise allowed there was no increase in its size. There had been some recurrence of the symptoms, which had at once yielded to the same treatment.

Dr. FLETCHER LITTLE showed a case of Raynaud's Disease occurring in an otherwise healthy young woman, nineteen years of age. After having been subject to attacks of blueness of the fingers for some months, she was attacked during the cold weather with gangrene of the index, middle, and ring fingers of both hands. The toes were unaffected. The cheeks were somewhat thickened and sclerodermatous. The association of scleroderma with Raynaud's disease was noticed by

Raynaud himself, and the observation was confirmed by Dr. Coupland. Relief had been afforded in this and another similar case by the administration of nux vomica.

Dr. S. WEST showed a man, thirty-nine years of age, who had suffered from Weakness of the Arms for two years. The deltoids and the muscles around were strong and well developed, and the muscles of the hands were unaffected. The muscles of the arm and forearm, however, were very weak and much wasted. A few of the muscles in the forearm showed the reaction of degeneration imperfectly. He inclined to the view that it was a case of myopathy rather than one of progressive muscular atrophy.

Mr. F. C. WALLIS showed a new method of treating an Intractable Ulcer of the Leg. The ulcer had increased in spite of the ordinary treatment. He found that Thiersch grafts were not successful when implanted on the surface of a chronic ulcer. He therefore made two long parallel incisions a little distance from the borders of the ulcer, and having separated the skin from the subjacent tissues he was able to bring the edges of the ulcer together. Two gaps were thus made at the site of the lateral incisions, and these he had filled by Thiersch grafts. So far the results were satisfactory.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

The Royal Commission on Vaccination.

A MEETING of this society was held on Feb. 19th, Dr. G. P. BATE, President, being in the chair.

Dr. ARMSTRONG resumed the discussion on the recommendations made by Dr. Bond at the last meeting (Jan. 15th) by calling attention to the amount of insufficient vaccination, which was for all practical purposes no vaccination at all. He considered that the society should take up the matter seriously, impressing the fact upon the Legislature especially in reference to the report of the dissentient members of the Royal Commission, who studiously ignored degrees of sufficiency—indeed, if uniformity could not otherwise be secured he would have the practice of vaccination restricted to responsible public officers.—Dr. NEWSHOLME thought that one advantage accruing from the postponement of the operation would be that the eruptions so frequent in early infancy would have already appeared, and therefore would not be, as they were now, on the *post ergo* principle, ascribed to vaccination.—Dr. MITCHELL WILSON (Doncaster) looked on the demand for better inspection of common lodging-houses as a reflection on the officials of the sanitary authorities unless it involved the power to re-vaccinate, which they had not at present. But in workhouses, where the guardians could enforce labour, &c., their compulsory powers might be extended to include vaccination, for the tramp in the casual ward was in a different position from the free man in a lodging-house.—Dr. ARMSTRONG interposed that the tramp on the tramp was more dangerous than he was in the workhouse or lodging-house.—Dr. BOND complained that, so far from encouraging the use of calf lymph, the Local Government Board resented frequent applications for it.—Dr. RENNER followed on the same lines, expressing his preference for glycerised lymph, which was used long ago in Italy and which Dr. Copeman had shown improved, instead of deteriorating, by keeping. All vaccinations should be inspected on or before the eighth day, after which it was no longer possible to complete an imperfect success by additional insertions.—Dr. COPE, approaching the subject from the standpoint of the public vaccinator, maintained that the station system could not be superseded. Much might be said in favour of home vaccination, but it would impose great trouble on the public vaccinator, and he would appear as a tout and a rival to other medical men. The school was still more objectionable; he would there come into collision with the officials of the School Board and Education Department, and with absence, evasion, or actions for assault. At the stations publicity made the parents civil and the infants clean, and their retention was necessary for the teaching of students. The Vaccination Officers' Association had for twelve years pressed on the Local Government Board most of the recommendations now put forward by the Commissioners.—Dr. WILLOUGHBY said that both in the press and at the meetings of the society he had pleaded for a form of certificate that should indicate the degree of success obtained, but that this should be expressed by the number of vesicles, which could always be counted, rather than by their aggregate area, which it was impossible to verify after the lapse of years; besides the lessened risk of wound infection from delayed healing when numerous small vesicles were substituted for a few large abrasions. He insisted on the importance of re-vaccination about the age of puberty, without which the operation should be considered as only half performed. It was to forty years of this practice that the city of Frankfort enjoyed immunity from the epidemic that during the Franco-German War ravaged the rest of Germany and Europe, and to its adoption throughout the empire was due the almost complete extinction of small-pox in Germany, the deaths in that country having for some years past been as 1 to 100 in Switzerland, 110 to 120 in England, 260 in France, and 640 in Holland, and even these were mostly those of foreigners or on the frontiers of Russia and France, and the victims of the imported infection were for the most part infants not yet vaccinated or persons who, born before 1860 and not having passed through the army, had escaped re-vaccination. He approved the use of calf-lymph as a concession to popular prejudice only, and not from any belief in its superiority. But he would urge on the Institute of Preventive Medicine and the Local Government Board the duty of producing and supplying new strains of lymph obtained by variolation of the cow, as had been done by Voigt of Hamburg in 1881, and subsequently by Haccius, Fischer, King, Simpson, and others, and the superiority of which was shown by the fact that whereas in Germany generally 97 per cent. of the legal re-vaccinations were successful, in Hamburg, where Voigt's lymph had been almost exclusively used since 1882, the majority of native children were as yet insusceptible.

Dr. BOND replied shortly to each of the preceding speakers, expressing his belief that the difficulties of home and school vaccination had been exaggerated.

HUNTERIAN SOCIETY.

Torticollis and its Treatment.

A MEETING of this society was held at the London Institution on Feb. 24th, the President, Dr. G. E. HERMAN, being in the chair.

Mr. VICTOR HORSLEY delivered the second Hunterian Society Lecture and chose for his subject "Torticollis and its Treatment." He first enumerated the different forms of torticollis and gave a description of each, and then gave an account of their causation and of the experimental evidence as to their production. The treatment by drugs, electricity, and surgical methods suitable to each form was dwelt upon. The lecture was illustrated by several photographs thrown on the screen by limelight. At the conclusion of the lecture a hearty vote of thanks proposed by the PRESIDENT was carried unanimously.

NORTH OF ENGLAND OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—Retention of Menstrual Blood.—Puerperal Septicæmia Treated by Tincture of Digitalis.

A MEETING of this society was held at the Medical Institution, Liverpool, on Feb. 19th, Dr. ARCHIBALD DONALD, Vice-President, being in the chair.

Mr. E. STANMORE BISHOP showed: (1) Fibroid Uterus with Cervical Carcinoma, removed by vaginal hysterectomy; (2) Fibroid Uterus with Double Cyst, removed by vagino-abdominal section, ligature of the lower half of the broad ligaments was the first step and the operation was completed by suturing the vaginal opening and no drainage of the abdominal cavity; (3) Dermoid Cyst, removed by abdominal section from a girl aged fourteen years; and (4) Ovarian Abscess with Fibroid Uterus.

Dr. LLOYD ROBERTS showed: (1) A portion of a Lead Pencil removed from the Bladder of a married woman aged thirty-seven years. The pencil shown was a "stub" of an ordinary long lead pencil measuring two and a half inches in length and deeply encrusted with a phosphatic deposit. At the part least mutilated by the forceps in removal the diameter of the foreign body—pencil and crust—was rather more than half an inch. (2) Left Ovary and portion of the Fallopian Tube removed by posterior vaginal cœliotomy. The ovary was

the size of a Tangerine orange and cystic, and was firmly adherent to surrounding structures.

Dr. T. B. GRIMSDALE showed the Fallopian Tubes removed by abdominal section for Tuberculous Salpingitis. The tubes were studded with miliary tubercle in their peritoneal covering and distended with fluid; they measured six inches in length and were of about the thickness of the index finger. The fimbriated end of the tube was enlarged.

Dr. ARTHUR WALLACE read notes of a case of Retention of Menstrual Blood in the Right Imperforate Half of a Septate Vagina and Uterus Bicornis et Bicollis. The patient was aged twenty-two years. Menstruation commenced at sixteen years, and she was regular. There was a swelling in the abdomen occupying the right iliac, lumbar, and umbilical regions, and measuring four inches in diameter. *Per vaginam* a swelling was felt which appeared to lie outside the vaginal wall on its right side and to be continuous by a constricted portion with the abdominal swelling, forming a dumb-bell-shaped swelling. The vaginal swelling was tapped and eighteen ounces of treacle-like blood escaped, after which the cervix was felt high up behind and to the left of the swelling, and the sound passed three inches.

Dr. GLYNN WHITTLE read a paper describing ten cases of Puerperal Septicæmia treated by tincture of digitalis, the primary aim being direct control of the pulse. An accompanying benefit, but one following as a secondary result, was relaxation of tonic contractile spasm of the sphincter at the os uteri internum, leading to flow of the lochia and consequent diminution of temperature. Rapid improvement was usually effected, followed by complete recovery in about five or six days. The dose given was ten minims every three hours, the dose being doubled or trebled if necessary according to the indications of the pulse. In seven of the cases the uterine douche was not used. The maximum amount of tincture of digitalis swallowed by any one patient was twelve fluid drachms and thirty minims in five days. Criticism was specially directed to the "fool's paradise" of the uterine douche in unskilful hands, a calamitous record of treatment which has led to the loss of countless lives.—Dr. DONALD, Dr. LLOYD ROBERTS, Dr. STOOKES, Dr. DAVIES, and Dr. GEMMELL took part in the discussion which followed, and Dr. WHITTLE replied.

LIVERPOOL MEDICAL INSTITUTION.

Successful Brain Localisation and Operation for Idiopathic Insanity.—Membranous Cast of Trachea and Bronchi.—Treatment of Dacryocystitis.—Treatment of Lateral Curvature of the Spine.

A MEETING of this society was held on Feb. 25th, Dr. RICHARD CATON, President, being in the chair.

Mr. STREET and Mr. DAMER HARRISSON related a case of Successful Brain Localisation and Operation for Idiopathic Insanity. The patient was a man, who for two years had hallucinations of hearing, without any previous head injury. He became depressed, was unable to sleep, and took to drink. The voices were those of friends far away, and they goaded him to destroy himself in order to avoid disgrace. He had constant headache on the left side. He took six grains of opium daily without procuring sleep. He had attempted to cut his throat. Mr. Damer Harrisson trephined, making a large opening over the centre for hearing and opened a serous cyst. The result was entire recovery, and the man is now at work.

Dr. P. DAVIDSON showed a Membranous Cast of the Bronchial Tubes with numerous branches. It had been coughed up by a child supposed to be suffering from diphtheria. Part of this examined microscopically was found to contain almost a pure cultivation of micrococci. No Löffler's bacillus was discovered. Dr. Davidson, however, considered the case undoubted diphtheria. There was membrane on the tonsils and in the respiratory tract. Tracheotomy had been performed for dyspnœa. Diphtheria antitoxin had been injected. The patient was shown still wearing a tracheotomy tube. Dr. Davidson remarked that in several of the most marked cases of diphtheria that he had seen no Löffler's bacillus had been found in the membrane examined.—Mr. BARK drew attention to the value of curetting the trachea and bronchi through the tracheotomy wound in cases of diphtheria where dyspnœa occurs after the operation.

Mr. HUGH E. JONES read a paper on the Treatment of Dacryocystitis. Of fifty consecutive cases of mucocele, blennorrhœa, and abscess of the lacrymal sac, thirty-seven had neither cicatricial stricture of the nasal duct nor obvious disease of the nose. The remaining thirteen were divided amongst various forms of organic stricture and of coarse nasal disease. The cause of the obstruction in the large majority of cases was engorgement of the erectile tissue around the duct and catarrhal swelling of the lining membrane. Later the obstruction was due in a large measure to over-distension of the sac. The objects to be kept in view during treatment were—(1) to avoid interference with, and to preserve as far as possible the physiological integrity of, the organ; (2) to render the whole tract aseptic and to restore the mucosa to a condition of health; and (3) to reduce reflex irritation of the lacrymal gland to a minimum. The prolonged use of probes (especially large ones) and styles (apart from direct injury) induced sclerosis of the tissues, made the canaliculus of no physiological use, and sometimes caused periosteal stricture of the duct. These means of treatment should be classed among *derniers ressorts*. Partial slitting of the canaliculus followed by antiseptic irrigation, as suggested ten years ago by Edgar Browne, was by far the best, most scientific, and most rapidly successful treatment. The fact encouraged him (Mr. Jones) to dispense with slitting the canaliculus in suitable cases, and he made instead an opening in the dome of the lacrymal sac above the tendo oculi. In incipient cases of obstruction injections of a solution of cocaine and pinol in paroleine, made with Anel's syringe through the undivided canaliculus, seemed the most rational, paroleine being very diffusible and cocaine reducing vascular engorgement.—Mr. BICKERTON said he would adopt the irrigation treatment in all cases where symptoms of obstruction of the nasal duct had existed for a comparatively short time. But he dissented from the following statements of Mr. Jones: (1) "that undoubted cicatricial periosteal and bony stricture was rare"; (2) that treatment "by large probes, Stilling's knife, and styles were *derniers ressorts*"; (3) that they should be classed with such extreme methods as excision of the lacrymal gland and obliteration of the lacrymal sac; (4) that "the assumption (in practice) that the prime cause of dacryocystitis is in nearly every case stricture (i.e., cicatricial stricture) of the nasal duct cannot be sustained"; and (5) that "the prolonged use of probes and styles in treatment induces sclerosis of the tissues and sometimes causes stricture of the nasal duct." The rest of the discussion on this subject was adjourned to the next meeting.

Mr. BANKS read a paper on Practical Experience in the Treatment of Lateral Curvature. He dealt with the early symptoms of lateral curvature of the spine, such as rotation of the vertebræ, projection of the transverse processes and prominences of the scapula and ilium; with the theories of the production of these; with the general points to be held in view during treatment; and, finally, with the details such as couches, seats, exercises, mechanical appliances to the body, correction of bad habits of posture, &c. The paper was illustrated by diagrams and specimens.—Mr. ROBERT JONES said that the causation of the curves was still obscure, despite the experiments of Judson, Bradford, and Lovett. Amongst early symptoms care should be taken to discriminate between the lateral deviation due to unilateral absorption in spinal caries and starting scoliosis. He strongly deprecated the use of shoulder straps and poroplastic jackets.—Mr. RUSHTON PARKER and Mr. A. MACLEOD ROSS also took part in the discussion.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Specimens.

A PATHOLOGICAL meeting of this society was held on Feb. 19th, Dr. BRAITHWAITE, Vice-President, being in the chair.

Dr. CHURTON showed a specimen of Sarcoma of the Kidney. The patient had been under observation eight years. There was no secondary growth elsewhere.

Dr. WARDROP GRIFFITH showed specimens of Changes in the Osseous System. Among these were one of Osteo-arthritis of the Spine, with thickening and ossification of the anterior common ligament of the bodies causing ankylosis of eight

vertebræ. At one point this splint-like mass was fractured and a false joint had developed.

Dr. WARDROP GRIFFITH and Mr. LITTLEWOOD showed an Intestine from a patient who died from empyema, but who was operated on two years ago for a foul-smelling abscess in the region of the cæcum. The point of interest was that the only evidence of any operation was a slight dimple in the peritoneum opposite the skin incision and some very slight extremely delicate adhesions around the appendix which did not present any evidence of disease beyond slight thinning of its mucous membrane at one point and in the peritoneum. Close to this was a small mass of cheesy-looking pus the size of a pea.

Dr. BASIL HALL showed a series of Casts of Deformities of the Feet. These included single and double club-foot, pes cavus and acquired talipes equinus, and calcaneus.

Dr. BRAITHWAITE showed some sections of Glandular and other forms of Fungosities of the Uterus.

Dr. BARRS showed the Viscera from a case in which the diagnosis lay between splenic anæmia and idiopathic anæmia.

Mr. C. J. WRIGHT showed some large Masses of Molar Tissue removed from the uterus on two occasions, four weeks after the birth of a full-term living child. The patient, who had had three confinements and was thirty-six years of age, had a natural labour, but the uterus still remained large, leading to the supposition that there was another fœtus. On the twenty-seventh day she was brought to Mr. Wright with a protrusion from the vagina the size of a cocoanut. Dense, offensive membranous masses which filled a pint basin were removed, and the next day under ether the uterus was emptied and cleansed. The patient made a rapid recovery. There had probably been a twin conception with one ovum blighted.

Dr. SELBY showed—(1) a Tuberculous Kidney which had become converted into a Fibrous Structure containing Embedded Calcareous Masses; and (2) a specimen of Double Calculous Pyo-nephrosis, the right kidney containing numerous calculi with a quantity of fœtid pus, and the left being converted into a loculated pyonephrosis containing about two pints of very foul pus.

Dr. HELLIER showed Shäffer's Gynæcological Plates and a Uterus removed by Vaginal Hysterectomy for Carcinoma, the patient eventually recovering.

Mr. LITTLEWOOD showed Sixty Calculi removed by suprapubic operation from the bladder of a patient aged sixty-nine years.

Mr. SECKER WALKER showed the two halves of an Eyeball incorporated with a Spindle-celled Leuco-sarcoma which filled the orbit.

Mr. WALTER THOMPSON showed the Large Intestine of a patient who had died suddenly twenty-four hours after the administration of ether per rectum for an operation on the mouth which lasted forty minutes. Four ounces of ether were used. The mucous membrane was congested and almost all over was marked by extravasations of blood.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF ANATOMY AND PHYSIOLOGY.

Exhibition of Lantern Slides.—The Applied Anatomy of the Rectum.—Organic Sulphates of the Urine.

A MEETING of this Section was held on Feb. 5th, Dr. JOHNSON SYMINGTON, the President, being in the chair.

Dr. A. FRANCIS DIXON exhibited a number of lantern slides illustrating Early Human Embryos. The first slides illustrated an unopened chorionic sac, measuring 8 mm. by 7 mm. by 3 mm., the probable age of which was estimated at fourteen days. The flattening of the sac was assumed to be due in great part to shrinking of the decidua by which it was surrounded when first obtained by Dr. Murphy. The greater part of the sac was covered all over by short, stout, slightly branched villi. Over one pole, however, there was a bare area of small size. The presence of this bare area and the size of the sac would fix the age of the ovum at fourteen days. This determination agreed sufficiently well with the history of the case from which it was obtained. The second series of slides illustrated the external anatomy of two embryos of from twenty-two to twenty-three days. In one the amnion and yelk sac had been removed, while the other was photographed through the amnion, and the yelk sac was in position. Finally, three photographs were shown of an embryo of from thirty-three to thirty-four days. In this last embryo the photographs displayed not only the external markings on the embryo itself, but also gave a good view of the allantoic and vitelline arteries.—The PRESIDENT asked Dr. Dixon what preservative he used for the embryos. He himself had found corrosive sublimate the most satisfactory.—Dr. BIRMINGHAM inquired as to the method in which the photographs were taken.—Dr. DIXON, in reply, said he had always used methylated spirit for preserving his human embryos. Nitric acid was best for preserving fowl embryos. In photographing, the specimens were placed in glass cells with dark bottoms, the cells were completely filled with spirit and the cover slid on, so as to exclude all air bubbles. Special care had to be taken with the lighting.

Dr. EDWARD H. TAYLOR made a communication upon the Applied Anatomy of the Rectum, which he illustrated by lantern slides of frozen sections and of dissections specially prepared to illustrate the structures met with in perineal and sacral excision of the rectum. Having demonstrated the principal relations of the rectum in both sexes he referred to its sphincteric apparatus, which is constituted by the two sphincters and the levatores ani muscles. The latter were shown and the *rôle* played by them as rectal sphincters pointed out. It was evident, from the antero-posterior direction taken by the fibres of these muscles by the sides of the rectum, that in contracting they compressed the bowel laterally. In proof of this statement Dr. Taylor mentioned that if the finger were introduced into the rectum in the living subject both the extent and the tonicity of the anal canal (sphincteric zone) could be well determined. It was possible to appreciate a deep and a superficial contracting zone. The latter was certainly due to the external sphincter, whereas the former was evidently caused by the levatores ani, the contractions of which were both voluntary and sudden, thus differing from the internal sphincter, which contracted slowly and independently of the will. In perineal excision of the rectum Dr. Taylor laid stress upon the importance of always making an attempt, even when the sphincteric zone of the rectum had to be removed, to re-construct a modified sphincteric apparatus, and showed how this might be done by carefully preserving as much of the levatores ani muscles as possible and afterwards connecting them with the healthy end of the gut by a series of deep sutures. The applied anatomy of sacral excision was then considered and illustrated by photographs of dissections.—The PRESIDENT was glad to see that Dr. Taylor had emphasised the distinction between two parts of the rectum—the sphincteric and the supra-sphincteric areas; he (the President) would go further, for he held that they were functionally and anatomically distinct—the former was capable of acting as a reservoir, while the latter, which he had called the anal canal, was not.—Dr. BIRMINGHAM expressed the opinion that the internal sphincter was not a real functional sphincter of the anus at all. Its use was to force the fæces through the canal during defecation. The levatores ani, he believed, were the chief sphincter.—Dr. PURSER was inclined to agree with Dr. Birmingham's view of the nature of the internal sphincter.

Dr. COFFEY read a note on Organic Sulphates of the Urine.

TAUNTON AND SOMERSET HOSPITAL.—The annual meeting of the governors of the Taunton and Somerset Hospital was held on Feb. 11th, under the chairmanship of Dr. E. Liddon, J.P., the retiring president. The report of the committee congratulated the subscribers upon the continued and increasing usefulness of the hospital and the nursing institute. There was a deficit on the general account of £660, and a surplus of £243 on the nursing institute account. The committee suggested that this year, in which would be celebrated the sixty years' reign of the Queen, might be made the occasion of some special effort to improve the financial position of the hospital and enlarge the scope of its work, and it was decided to ask the Lord-Lieutenant of the county, the Earl of Cork, to call a public county meeting with this object in view. The Hon E. W. B. Portman was elected president for the ensuing year.

Reviews and Notices of Books.

The Diagnosis and Treatment of Diseases of the Rectum. By WILLIAM ALLINGHAM, F.R.C.S.Eng., ex-member of the Council of the Royal College of Surgeons of England; and HERBERT W. ALLINGHAM, F.R.C.S.Eng., Surgeon to the Great Northern Central Hospital and Assistant Surgeon to St George's Hospital. Sixth Edition. 1896. Baillière, Tindall, and Cox. Pp. xvi. and 485. Price London: 12*s.* 6*d.*

THE most striking characteristic of this volume is its eminently practical aim. Very little space is allotted to the discussion of abstruse questions of etiology and pathology, though these are by no means ignored, but the diagnosis and the treatment of the various morbid conditions are dealt with very fully and receive the greatest share of attention.

As a practical treatise on the diseases of the rectum we consider the book to be deserving of sincere praise, yet there are several points on which we cannot fully agree with the views put forward by the authors. In the description of the varieties of internal hæmorrhoids we find one variety called the "arterial hæmorrhoid." It is true that it is by no means uncommon to find a fairly large artery in the centre of an internal pile, but it is never found that a hæmorrhoid consists entirely or even in great part of arterial vessels, for such hæmorrhoids do not exist. Those which are so named consist for the most part of dilated veins. We heartily endorse all that the authors say as to the undesirability of injecting carbolic acid for the cure of hæmorrhoids, and, in fact, the method is but little practised at the present day in this country, but we must express our dissent from the condemnation which they also give to the treatment of hæmorrhoids by "crushing." When carefully employed excellent results are obtained, especially when combined with the use of the actual cautery, for by this treatment no hæmorrhage occurs, and this was the only drawback to Pollock's method. We acknowledge that ligature, the operation which the authors of this book chiefly favour, gives very satisfactory results, but this fact should not be allowed to discredit unduly other operative procedures.

As to Whitehead's operation, we are told that it is "one of the worst operations for piles," and yet with curious inconsistency the authors go on to say that for those who persist in employing this method an instrument devised by themselves is of "great assistance in simplifying this operation and in remedying some of its defects." We must protest against the statement that the operation is "difficult to perform," and certainly in suitable cases its results are unsurpassed. The book has reached a sixth edition, a distinction which it well deserves, for it supplies a very readable treatise on the diseases of the rectum.

The Practice of Midwifery: A Guide for Practitioners and Students. By D. LLOYD ROBERTS, M.D. St. And., F.R.S. Edin., F.R.C.P. Lond., Physician to St. Mary's Hospital for Women and Children, Manchester, Consulting Obstetric Physician to the Manchester Royal Infirmary, &c. Fourth Edition. London: J. & A. Churchill. 1896. Price 10*s.* 6*d.*

THE new edition of Dr. Lloyd Roberts's favourite little text-book has been considerably enlarged, containing nearly 200 pages more than its immediate predecessor, and the number of illustrations has also been considerably increased. The work has been revised, and many of the chapters have been re-written. We are glad to observe that the subject of antiseptics in midwifery has been given a chapter to itself, for although the author says "there is no need to insist upon the necessity for surgical cleanliness on the part of *medical attendants* and *nurses*," he implies that it is, in fact, of the greatest importance to take every possible care to obtain it, and proceeds to give a clear account of what must be done with this object in view. We observe that, while mentioning a solution of perchloride in glycerine as a lubricant for the examining finger, he rather prefers sapo mollis B.P., with 5 per cent. carbolic, or 1 per cent. lysol—as these "facilitate subsequent washing"—for the purpose in question.

There are a few points here and there on which the information in the text is a little open to criticism; for instance, in describing ballottement the author says: "The point of one finger is passed to the cervix uteri and a sudden impulse made in an upward direction," &c., whereas of course the right position for the finger in order to obtain this sign is in the anterior fornix. Again, in speaking of mento-posterior positions of the face, it is stated that "mento-posterior cases are dangerous because of the stretching and pressure on the bloodvessels of the extended neck. It is advisable to relieve this as soon as possible, and forceps are to be used early if rectification does not occur naturally or by means of the method indicated above"; but it is not impressed on the student, as we think it should be, that delivery with the chin posterior is impossible in the large majority of cases, and that, unless the chin can be made to rotate forwards, craniotomy will be required. We think also that at the present day the description of transfusion of blood for hæmorrhage might well have been omitted, since this operation has been very generally replaced by the intravenous injection of saline fluid. At the same time these are minor defects and do not materially detract from the general excellence of the work. We have no doubt it will be found by the present generation of students to be a useful exposition of the subject—concise and generally reliable.

A Manual of Clinical Diagnosis by Means of Microscopic and Chemical Methods. By CHARLES E. SIMON, M.D. London: Henry Kimpton. 1896. Price 16*s.*

THERE is little need in the present day to dwell on the value and importance of the assistance given to clinical diagnosis, and therefore to treatment, by a thorough microscopical and chemical examination of the products of disease or of the blood and the various excretions. So important is it that within the past decade many a work has been published devoted solely to this one branch of clinical investigation, and there is no medical school where instruction upon it of a systematic kind is not to some extent imparted. Nevertheless, this necessary extension of the field of observation is in itself so wide and comprehensive that it becomes more and more difficult for the practitioner to follow. It needs a special department and a staff of highly trained experts to carry it out to the full; and it is this class of work which is being so well undertaken in this country by the Clinical Research Association. The author of the volume before us has enjoyed at the Johns Hopkins Hospital, Baltimore, ample opportunities for the study of the subject, and his treatise is in every respect excellent. Covering practically the same ground as the well-known work of Professor von Jaksch, the book contains in some sections even more information than does that volume. It is evident, too, that the author has himself largely confirmed the statements which he makes, and occasionally he feels bound to differ from the somewhat too dogmatic teaching that has dominated parts of the subject. We have, after a careful review of the contents of the book, no hesitation in commending it as one of the best and most compendious manuals for the clinical laboratory that has yet appeared. The subject-matter is arranged on a very systematic plan, the text is not burdened by references to literature, and the descriptions of apparatus as well as the instructions for the performance of tests are

clear and concise. Perhaps the best section is that devoted to the urine, occupying about one-half of the volume, but the sections on the blood and on the gastric juice and gastric contents are little, if at all, inferior in scope and fulness. In his preface Dr. Simon pleads for a more thorough recognition of these studies in places of instruction, and urges the younger members of the profession to pursue them with diligence. As he says, "It is inconceivable that a physician can rationally diagnose and treat diseases of the stomach, intestines, kidneys and liver, &c., without laboratory facilities." Whether his suggestion that physicians might usefully employ a laboratory assistant to enable them to carry out this duty will ever be realised, time with its advance of knowledge can alone show.

The Fall of the Congo Arabs. By SIDNEY LANGFORD HINDE, Medical Officer of the Interior, British East Africa, late Captain, Congo Free State Forces, &c. London: Methuen and Co. 1897. Price 12*s.* 6*d.*

This is an interesting book about an interesting and, to the average reader, little known country. Mr. Hinde served for some three years as medical officer to the Congo Free State forces during the campaign undertaken by the Belgians against the vassals and successors of Tippu Tib. The commandant was Baron Dhanis. All records of bush-fighting have a great resemblance the one to the other, and Mr. Hinde's are no exception to this rule, but he gives us a number of facts about the various tribes he encountered of whom perhaps the most remarkable are the Batwa, "the little people of the forest." These pygmies live in the dense forest of the Congo basin, are under four feet in height, and are armed with bows and arrows. Though feeble weapons to look at, they are extremely deadly, firstly because they are poisoned, and secondly because their owners can send three or four arrows so rapidly in succession that the last leaves the string before the first reaches its mark. The nature of the poison is unknown, and Mr. Hinde does not venture upon any speculations as to what it may be. "A man will die in from three to ten minutes after having been scratched. An elephant ..... scratched on the haunch by a poisoned spear fell down dead before going a hundred yards." Most of the tribes in the Congo basin are cannibals, and Mr. Hinde's followers after a fight always ate up the killed. The author's experiences with small-pox are worthy of notice, and we commend them to those ignorant fanatics who delight in risking the spread of disease in Leicester and Gloucester. "Our Hauswas were, with one exception, all vaccinated, and this man was the only one in the company who caught small-pox, and he died of it. In the Elmina company there were only two men unvaccinated, both of whom got small-pox and one of whom died of it. Of our Lower Congo porters very few had had small-pox, and only some half-dozen had been vaccinated. Among this body of 200 men rather over two-thirds took small-pox, and there were 65 deaths among them." Many tribes inoculate with small-pox, not having any vaccine; and unfortunately all the vaccine sent out to Mr. Hinde proved apparently inert. The book, though full of adventure and out-of-the-way matter generally, is very simply and modestly written.

JOURNALS AND REVIEWS.

The British Journal of Dermatology for January and February contains a Case of Myoma Multiplex of the Skin, by H. Radcliffe Crocker, with chromo-lithograph in the January number and microscope drawings in the February number; a comprehensive account and abstracts of all the published cases of this rare disease are appended to the history of the case. Malignant Syphilis is ably discussed by A. Neisser of Breslau. L. Wickham in a letter from Paris gives some interesting notes on Lichen Planus of the Mouth without Skin Eruption, which appears to be less known in France than in England; on Acanthosis Nigricans; and on Hereditary Syphilis of the Bones and Teeth. Reports of the Dermatological Societies and the usual abstracts from foreign sources conclude the January number. In the February number, besides the conclusion of the article on myoma alluded to, there is the record of some careful work by Justus of Budapest on the Alterations of the Blood Produced by Syphilis, in which he shows that the amount of hæmoglobin is greatly reduced in the secondary period without treatment, while with large doses of mercury there is a rapid and considerable further diminution which is soon recovered. This sudden diminution after the administration of mercury only happens in syphilitics and no longer occurs when the syphilis remits or is cured. W. T. Freeman gives a note on skin irritation caused by handling hyacinth bulbs, and H. Skinner furnishes a useful pharmaceutical criticism on some new remedies and formulæ. It will be seen, therefore, that the articles are of scientific, clinical, and practical interest.

Archiv für Dermatologie und Syphilis. Vol. XXXVIII. 1897. Parts I. and II.—This old-established periodical keeps up its reputation. Part I. contains an elaborate illustrated article by Max Joseph on the Anatomy of Lichen Ruber Planus, Acuminatus and Verrucosus. A case of Lichen Planus is reported which was treated at the Breslau Hospital by subcutaneous injections of arsenic which produced arsenical pigmentation, keratosis of palms and soles, and peripheral neuritis, though the author, Max Dreysel, was inclined to consider alcohol as the cause of the last symptom. C. Bruhns, of Bern, relates his investigations on the much vexed question of the etiology of trichorrhexis nodosa, a disease of the hair which appears to be common in Bern. While his own experiments were negative as far as adducing proof of the bacteriological origin of the disease is concerned he concludes that therefore it cannot be proved to be a bacterial disease, although there are some facts in favour of it. Kopp gives a short account of a case of Multiple Angiomata in a young man. They seem to have been numerous stellate capillary striæ, of which cases have been described and figured in this country. Finally, J. Schütz recommends that Lupus Erythematosus should be treated by repeatedly painting with a diluted Fowler's solution 1 to 5 or 8, until some redness and swelling is produced, when the part is soothed until the inflammation has subsided and then the painting is resumed. In Part II. the original articles are:—1. A. Kozerski describes a Case of Actinomycosis of the Skin treated with success with large doses of iodide of potassium. Photographic illustrations before and after treatment are given. Ten grammes of iodide a day were reached. He states that suppuration may be produced by the actinomycosis fungus alone without the intervention of pus cocci. Some writers recommend washing out the sinuses with the iodide solution. 2. K. Herxheimer describes three cases of what he designates as Impetigo Contagiosa Vegetans, and in connexion with their histology he discusses the pathology of the protoplasm of epithelial cells. 3. L. Wallsch gives a further communication on the Pathology of the Hyphomycoses, taking the anatomy of pityriasis versicolor as his special theme. 4. M. Hintner adds yet another case of Multiple Skin Gangrene in an anæmic, strongly nervous girl, aged twenty-one years, but rejects the theory of its being self-induced. 5. E. Spiegler contributes Histological Studies on Eczema Marginatum, illustrated with three plates. He finds the fungus exclusively in papules formed by the altered horny layer and that it never penetrates into the rete. 6. Löblowitz advocates the use of airol, an iodine compound with dermatol, in dermatological practice, and

thinks that it may even supersede iodoform. Both numbers conclude with the usual reports of societies and copious extracts from dermatological literature.

Chirurgia. Vol. I., No. 1. January, 1897. Edited by Professor DIAKONOF. (Monthly, 8 roubles per annum.)—This is the first number of a new Russian journal, published under the editorship of the Extraordinary Professor of Operative Surgery in the University of Moscow. As its name implies it is devoted entirely to surgery. Nearly half the present number is taken up by Dr. Pomerantzef's article on Brom-ethyl as an Anæsthetic. The subject is discussed mainly from its chemical aspect; the writer regards brom-ethyl as a safe anæsthetic, suitable for country practice, as it can be kept for a long time without decomposing, while the yellow discoloration shows at once if decomposition has set in. The chemical tests of its purity are also very simple and easily applied. Dr. Sventzitzki discusses the technique of Trephining. Dr. Ikavitz reports a case of Wound of the Liver through the Thorax followed by recovery; and Dr. Varnek describes two successful cases of treating Tuberculous Peritonitis by operation. An article on Extra-uterine Pregnancy by Dr. Bobrof completes the original communications. The remainder of the number contains brief abstracts of a group of twenty-six articles in different languages on Diseases and Injuries of the Head, a series of reviews of current surgical literature by the editor, and short notes and news. The journal is well printed on good paper. The editor's address is Moscow, Tverskaia, No. 69.

Among the monthly publications of the Religious Tract Society the *Sunday at Home* has a brief article on Stangate Creek, the Medway Quarantine Station. At one time it was the custom to bury those dying on board a quarantined vessel in the adjacent marshes, and there still exists one solitary gravestone which serves to mark, not only the burial place of many victims of fever and plague, but also the resting place "of one of the many heroes of the medical profession who, in seeking to save life, have lost their own." This is the grave of Sidney Herbert, a surgeon of the Royal Navy, who succumbed to fever while attending to the sick on board H.M.S. *Eclair*. The vessel was placed in quarantine on her return home from the West Indies in 1845.—The *Leisure Hour* contains several articles of interest, among them a sketch of Mr. Ruskin's Social Experiment, the St. George's Cottages, Barmouth.—The *Girl's Own Paper* and *Sunday Hours* are interesting as usual.

St. Mary's Hospital Gazette.—The February issue contains an editorial reply to our question asking whether it would not "be possible for the new medical officer [the casualty physician] while making his selection of suitable cases from a medical point of view to give an eye to each case with regard to the worthiness on the part of the patient to receive free treatment." Says the editor: "To the initiated it is clear that the strictly professional duties of the casualty physician will be more than sufficient to occupy his attention without entering into the social conditions of the patients." We can only say that if "to the initiated it is clear that the strictly professional duties of the casualty physician will be *more* than sufficient to occupy his attention," he would be far better employed in the occupation suggested by us. If his duties will be more than sufficient to occupy his attention, it was a farce to make the appointment.

Guy's Hospital Gazette.—The first part of a Clinical Lecture by Dr. Newton Pitt in the current number will be read with interest, as the number of cases admitted into the medical wards has very greatly increased of recent years. "R. O. M." concludes his Notes from a Holiday in Persia with a hint to patients suffering from nervous debility or from eating or drinking too much. "I could most highly recommend," he says, "the ride from the Caspian Sea to the Persian Gulf as a variation on the traditional sea voyage and baths."

The March number of the *Practitioner* contains some wholesome editorial remarks upon Hospital Reform, one of which is as follows: "I am convinced that until some penalty is attached to the abuse of medical charities things will remain pretty much as they are." Mr. Morris suggests that any deliberate abuse might be dealt with as fraud, or, at any rate, as begging. Coming to the more purely professional papers Sir Dyce Duckworth has an interesting communication upon Cirrhosis of the Liver, laying stress upon the fact that it is not a merely local disease, but only a local manifestation of a very general disease. He also points out that in the later stages great benefit to the patient, if not to the complaint, arises from the giving of a little alcohol. Mr. Quarry Silcock writes upon Empyema of the Frontal Sinus, and Dr. Archibald Donald upon Phantom Tumour, which, he says, is by no means always hysterical, and quotes an interesting case where the tumour was a reflex symptom produced by pelvic peritonitis. Dr. Greig Smith brings forward facts to prove that Robert Houston did not perform an ovariotomy in the celebrated case of Margaret Millar, but only incised and drained an ovarian cyst.

THE INTERNATIONAL SANITARY CONFERENCE.

THERE is not very much to be chronicled this week in regard to the International Sanitary Conference at Venice, but a good deal of work has nevertheless been done and things are progressing favourably; the discussions that have taken place have served to clear the atmosphere, as it were, and their general trend has been of a business-like character and in a practical direction. The technical committees have done much in formulating their reports. The announcement of the Hon. M. Herbert at a general sitting of the Conference that the Indian Government had entirely prohibited this year's pilgrimage was received with general applause. We are mainly indebted to the excellent accounts which have appeared in the *Times* for our facts regarding the Conference. Surgeon-Major-General Cleghorn's description, too, of all that has been or was being done at Bombay was apparently regarded as satisfactory, although, as might have been anticipated, some of his deductions and views in regard to the nature of the plague and its intimate connexion with and dependence upon local conditions rather than upon its purely contagious properties did not carry conviction to all. He said that since the outbreak in Bombay about 300,000 people had left the city and that the disease had only been carried to and effected any lodgement in one other place (Karachi), and that the panic prevailing in Southern Europe was to be deprecated. The delegates of the various Powers followed with announcements of the action taken or proposed by their various Governments. Russia has prohibited all, even Christian, pilgrimages within her dominions. Persia announced the suppression of Shiite visits to Mesopotamia and described the composition of the Sanitary Council at Teheran. Turkey, holding that pilgrimage was one of the cardinal points of the Mohammedan faith, declared that it could not be prohibited. No decision has apparently yet been arrived at by Turkey in regard to the ratification of the Paris Convention.

THE CANCER HOSPITAL (FREE), BROMPTON, LONDON, S.W.—The annual meeting of governors was held on Wednesday, Feb. 24th, Sir George Samuel Measom being in the chair. The report showed that during the past year 2345 new patients were received, 829 as in-patients and 1516 as out-patients, whilst the total number of attendances of out-patients was 13,786, these figures being in excess of any previous year. The report and balance-sheet were adopted and the usual vote of thanks accorded, after which the proceedings terminated.

THE LANCET.

LONDON: SATURDAY, MARCH 6, 1897.

THE MEDICAL STAFFS OF HOSPITALS AND HOSPITAL ABUSE.

IT is undeniable that the subject of the abuse of hospitals is coming to the very front of questions affecting the prosperity of these institutions. The response to the kind and wise appeal of the PRINCE OF WALES and the munificent gift of Sir BLUNDELL MAPLE are proofs, if any were wanting, that money enough will be forthcoming if the public can be satisfied that it is well used. It is, indeed, possible that more than enough money may be forthcoming—a possibility which only makes it the more proper to take precautions against such a sum being used in a way to swell the existing evils. We are persuaded that many who are working most cordially and actively for the success of the PRINCE OF WALES'S Hospital Fund for London are sincerely anxious that it shall do the greatest amount of good and the least amount of harm. But the ardent friends of hospitals are apt to fall into a completely one-sided view of schemes for the benefit of these institutions. It is on record, as Mr. LOCH has pointed out, that Sir SYDNEY WATERLOW, in the early days of the Hospital Sunday Fund, was careful to point out that hospitals were not meant to exempt the working classes from making their own provision for attendance on themselves and families in the ordinary sicknesses of life—a provision which many of them make in medical clubs, or friendly societies, or, best of all, by application to a local practitioner. But in later years Sir SYDNEY WATERLOW has been increasingly reluctant to see the growing abuse of hospitals, which to everybody else is so apparent, and to use the great power of the Council of the Hospital Sunday Fund for its friendly correction. Mr. BURDETT is a still more striking example of the danger of a one-sided view of the hospital question. He has represented the evils of the out-patient system to be such as called almost for its abolition—at least, for a time. Yet when an opportunity offered in the Council of the Hospital Sunday Fund for helping the friends of reform he came to the conclusion that the Council was "only a collecting body, and the proper persons to deal with hospital abuse are the members of the medical profession"! Can anything be said more likely to belittle the Council of the Hospital Sunday Fund or the religious bodies which so generously contribute to it as to represent them as mere collectors, without intelligence or responsibility for securing the right use of what they collect? The public prominence which is now being given in the medical and the lay press to the facts of hospital abuse will soon convince Mr. BURDETT that mere collectors are not so numerous or so blind a species as he seems to think; but that sooner or later the facts will have to be faced and a remedy for abuses provided if subscriptions are not to fall off. And laymen who represent hospitals and administer the funds of the public subscribed for this purpose must take their share in devising remedies.

Still, the profession has an enormous responsibility in this matter. Its leaders work the hospitals. Their skill and their opinion, to be had gratis in the hospitals, and that almost without let or question, make the attraction of hospitals and make it more and more irresistible. This attraction has come to be so great as to draw practically a fourth part of the inhabitants of the wealthiest city in the world, including—it has been demonstrated over and over again—a proportion of really wealthy and comfortable people, and, of course, a much larger proportion of well-paid workpeople. There is nothing else like it in any other department of life. Huge establishments for supplying all comers with clothes or food of the best on gratuitous terms would be scouted as demoralising to the applicants and unfair to subscribers, who meant only to help those who cannot help themselves. But in the matter of medicine pauperism is cultivated on a large scale by the laxness of hospital administration. It is excused on the score of the exigencies of the medical schools, though a distinguished surgical teacher of a great school has said that there are four times as many applicants as are needed for purposes of medical education. It seems the cruellest inconsistency in the world, on the one hand, to draw students by the thousand, and, on the other hand, to encourage the competitive action of hospitals by attracting the classes to which the students as young practitioners are to look for honest and self-respecting patients. Yet this is the demonstrated working of the out-patient system as at present administered, and in the last result it is upheld by the medical staffs of hospitals, as many of them are now beginning to see. It is a matter of urgent importance that it should be made clear to all members of medical hospital staffs that in the promiscuous services of the unregulated out-patient department they are encouraging a system which tends to dry up the springs of charity on the one hand and of providence on the other, and which saps the foundations of medical practice in all but the wealthier sections of society.

We are satisfied that this action of hospital physicians and surgeons is unintentional. They do not realise that they are unconsciously doing all this harm in work which superficially considered has a certain air of kindness and humanity. How can this impression be corrected? There is only one way, and that is by friendly discussion of the subject within the profession itself. Let there be no strife over the discussion. A conference should be organised by the coolest heads of the profession for the purposes of such a discussion, and the object of such a conference should be the union of the profession on this subject. If we are to be divided into consultants and non-consultants, if every man is to have his own remedy and reject every compromise, things had better remain as they are. But that would be a confession of failure, meaning alike the degradation of hospitals to the level of cheap dispensaries and the degradation of private practice to the starving point. There are indications in high quarters that this question of hospital abuse will have recognition. If the profession is united we shall succeed. If it is not we shall fail, and we shall deserve to fail. But one thing is certain, that the medical

staffs of the hospitals have the power to save hospitals and the profession by firm and united action. The present occasion is apt for such action, and we would earnestly impress upon those members of the profession concerned the absolute necessity of seeing that such an opportunity shall not be allowed to slip from their grasp.

IN a leading article in THE LANCET of Sept. 26th, 1896, we commented on the action of the Aberdeen students in getting rid of a professor who, while full of ability and erudition, had not the art of interesting or instructing them. First overt protest, then silent abstention from the class-room, was their plan of campaign. And it was successful. The University authorities, sitting in conclave on the situation, found the students so far justified that they requested the professor to retire on half the proceeds of the chair, and appointed a successor who, though not superior in natural or acquired ability, had the power of arousing and maintaining interest in the business of the class.

How differently they manage such matters abroad! From causes more or less cognate to that which impelled the Aberdeen students to action, the University of Athens, for instance, has had to be closed, the students holding the building in defiance of the military; while at Bologna, "the mother of universities," Senatus and students have been at open war, again requiring the intervention of armed troops. Bordeaux, too, has been recently the scene of similar collision, though on a minor scale, and Austria-Hungary and Russia have quite lately been furnishing object-lessons of a like deplorable kind. It would seem, in fact, as if only the Teutonic civilisation in general and its English-speaking branch in particular were capable of respecting and practically illustrating the exalted purpose for which universities are organised and maintained. Rare in Germany, academic indiscipline proceeding to violence is rarer still in the English-speaking world; and one result of this moral and social superiority is the undoubted fact that the scientific output of their schools is in quality and quantity greater than that of the whole outside world. There is one condition prevailing in Great Britain and denied to the nations of Southern Europe which may serve to explain the contrast between their academic records. In these islands there is pre-eminently the "settled government" which is of itself a factor in the maintenance of order and respect for authority. Greece and Italy, on the other hand, having thrown off within the century the foreign yoke which kept them down, have not yet thrown off the traditions inseparable from that ordeal. In both countries the elderly and middle-aged generation have passed their youth in an atmosphere of revolution. Their stirring, often noble, experience is still fresh in the minds of their sons, and between the two, the old and the young, the incidents of political upheaval and rehabilitation are fresh enough to mould and colour their attitude and thought towards the existing order. They are quick to perceive and quick to resent aught that savours of "authority" or "tyranny," and the consequence is seen, as successive Ministers of Public Instruction can too painfully attest, in the difficulty of exercising discipline or maintaining order in the universities of either country. If the Minister relies on the prestige of office or Cabinet rank he is reminded in the Chamber of Deputies that the students have their representatives there also—representatives drawn from the generation of their fathers—who began life in "the revolution." Our Rome Correspondent has recently commented on the opening of the winter session of the "Sapienza" and the collision between the Minister of Public Instruction and the students, provoked by the inflammatory address of the Professor of Moral Philosophy. The latter functionary had in consequence to receive a pointed reprimand, and the indignity thus inflicted on a rhetorical idol has been resented by the students ever since. The "solidarity" subsisting between all undergraduates throughout the kingdom explains the zeal with which the grievance of the Roman students has been taken up by their fellows in Naples, Palermo, Turin, and principally in Bologna, where the Minister, Signor GIANTURCO, was subjected to indignities which evoked the interference of the Senatus and the deplorable scenes of violence reported in the public press. His Excellency was on a State visit, prompted by the desire to do something for a vigorous, yet all too meagrely equipped, school—to furnish, *inter alia*, improved laboratories, cliniques, and other imperative conditions of academic efficiency. But this loyal purpose did not protect him from insults and violence on the part of the "socialist" students, whose ill-inspired conduct aroused, it is fair to say, a counter-demonstration on the part of their "monarchical" fellows. Between the two, however, in spite of professorial intervention, arose the collisions which brought in the military. The leading organ of the Italian Government, the *Opinione*, lately declared that it saw but one remedy for the recurrence of these tumults—the exclusion of "sectarian politics" from the universities. This, however, must be a work of time. The "premature publicist" is too rank, as well as too recent, a growth in Young Italy to be easily eradicated. The hour for that, as for other consummations, will not come until the great D'AZEGLIO'S aspiration be fulfilled: "Having made Italy, we have now to make Italians."

ALTHOUGH there is no prospect of the Food and Drugs Act being dealt with this session, the Bill providing for its consolidation and amendment has been prepared and was ordered by the House of Commons to be printed on Jan. 27th, 1897. We received a copy of this Bill last week, and we may say at once that it is a clear and very comprehensive measure and practically in complete accord with the recommendations of the recent Select Committee. We doubt, however, whether in its present form its sponsors will secure for it a calm and steady passage through the Houses of Parliament. Its very comprehensiveness will invite, if we are not mistaken, considerable contention. The object of the Bill is primarily to ensure the purity and quality of food and drugs sold to the public, but it must not be forgotten that it must very decidedly affect the traders and the trade of this country, and the interests of the traders must be safeguarded—in short, the Bill must be fair both to the purchaser and to the seller. On the face of it, while

the new Act is undoubtedly a somewhat drastic proposal, yet no one can honestly say that what are described in its provisions as offences are wrongly or unjustly so described. In our opinion it is an offence in any case for a person to sell to the prejudice of the purchaser any article of food, or drug, or clothing, or what not, which is not of the nature, substance, and quality of the article demanded by such purchaser. The public only want educating as to what they are entitled to ask for, and if that article is not supplied in accordance with this demand, an offence, we maintain, is committed.

The e is little doubt that the new Act, if it come into force, will put an end to much of the farcical procedure in the police-courts, cases of which during the last decade have occurred with irritating frequency. The definition of food according to the present Act has opened the way of escape to many an offender. The addition of alum to baking powder, for example, was permissible, but not to bread or flour. The term "food" is now to include every article "used for food or drink by man, other than drugs or water," and, moreover, "any article intended to enter into or be used in the preparation of human food and flavouring matters and condiments." The definition of the term drug is also widened, and is now to mean any substance, vegetable, animal, or mineral, used in the composition or preparation of medicines, whether for external or internal use. The penalties suggested are more severe in regard to repeated offences. Thus, for a first offence the person charged is liable to a penalty not exceeding £20, for a second offence not less than £5 and not exceeding £50, and for a third or subsequent offence to not less than £20 and not exceeding £100, or, at the discretion of the justices, to imprisonment, with or without hard labour, for a period not exceeding three calendar months. An interesting return to the wholesome methods of punishment of our forefathers is clearly suggested in Section 4, where, in the event of a convicted person repeating the offence, a court may order a notice of the facts to be affixed for a period not exceeding twenty-one days to the premises occupied by him, or may also order them to be published by advertisement in such newspapers as the court may decide, the person so convicted being bound to pay the costs thus entailed. We think this an admirable proposal, and we hope it will commend itself to the majority, at any rate, of our legislators.

As to the administration of the Acts, the new proposals, as generally set forth, are, we think, commendable. The appointment of the analyst, his dismissal, and remuneration are at all times to be subject to the approval of the Local Government Board, and not to be left, as before, in the hands of local authorities or vestries. The number of samples to be taken is not to be less than one sample per annum for every 1000 inhabitants living within the area of such local authority. In the event of the local authority refusing or neglecting to do this the Local Government Board will appoint an officer to take the number of samples provided and thus to enforce this provision. The cost of the appointment and functions of this officer is to be defrayed by the negligent authority. This is as it should be, and is a provision which ought to do away entirely with the unpardonable apathy of the local authorities in this matter, of which we have so frequently complained in these columns for several years past. Lastly, immediately after the passing of this Act there is to be appointed a Board of Reference, and we are in entire concurrence with the choice of representatives that is suggested. The Board is to consist of the principal officer of the Laboratory at Somerset House, a person nominated by the Board of Agriculture, and persons to be nominated by the following bodies—two by the Society of Public Analysts, one by the General Medical Council, one by the Institute of Chemistry, one by the Pharmaceutical Society, one by the London Chamber of Commerce, and one by the Association of Chambers of Commerce, and if need be of three other persons, the appointment of all of whom is to be subject to the approval of the Local Government Board. The duty of this Board will be to deal with such matters as the qualification of analysts and inspectors and with questions concerning definitions of purity and the standards of composition of articles of food, as well as to decide upon the amount and kind of foreign substances to be allowed for the preservation or flavouring of preserved foods.

As a measure intended to raise the standard and quality of our daily articles of food we have not a word to say against the proposed Act; but, as must be admitted, it attempts to deal with a subject that presents considerable difficulties from the practical legislative point of view. With the growth of technical knowledge, the advance of technical skill, and the progress of scientific methods applied to manufacture and industrial pursuits, the task of successfully grappling with fraudulent practices in connexion with food-supply becomes involved in deeper difficulty day by day. To us it is interesting to reflect how enormous has been the development of this section of administration since the days of THE LANCET Analytical Commission, when the Founder of this Journal, the late Mr. WAKLEY, showed, by the startling results which were published in the earlier numbers of THE LANCET, the necessity of immediate legislative interference to check the pernicious practices which he proved to be going on in regard to the adulteration of food. At that time it was one man with a small band of assistants who brought to light the frauds committed upon the public; since then the Food and Drugs Act (1879) has been in force, which has required not only a large staff of analysts under the control of the Local Government Board to carry out its provisions, but in reality also a Society of Public Analysts to devise new methods for the detection of new frauds; and, again, in the new Bill of 1897 it is proposed to appoint a court of experts to modify any legislative procedure that is suggested as the outcome of the increased ingenuity of unscrupulous persons. The discussion of this Bill in the House of Commons will be watched with considerable interest; but for this we fear we must wait awhile.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY.

The February meeting was held at Lewisham Infirmary on the 27th ult., the President, Mr. Walter Burney, being in the chair. Dr. F. S. Toogood showed cases of Progressive Muscular Atrophy, Tuberculous Peritonitis, Abdominal Tumour, &c. The annual general meeting and dinner will be held at the Inns of Court Hotel on March 27th, at 6.30 P.M.

Annotations.

"Ne quid nimis."

THE EXECUTIVE COMMITTEE OF THE GENERAL MEDICAL COUNCIL.

THE proceedings of the Executive Committee, as representing the General Medical Council in the interval of sessions, have always a certain importance. On this occasion the number was short, owing to the vacancies created by the resignation of Mr. Wheelhouse and Sir Walter Foster not being filled till the day of meeting. As our readers know, Mr. Brudenell Carter and Dr. Glover were appointed but did not take their seats. Intimation of a change in the representation of the University of Aberdeen was received, Mr. R. W. Reid, M.D. Aberd., F.R.C.S. Eng., Professor of Anatomy, succeeding Dr. Angus Fraser, who was a very useful member of the Council. The committee had various communications on the subject of midwives. The Midwives Bill was referred to the General Medical Council by the Lords of the Privy Council. A letter was received from Mr. G. W. Duncan, secretary of the Midwives Bill Committee. Resolutions against the Bill were received by the committee from the Rochdale and District Medical Society. A communication from Dr. Rentoul, asking the Executive Committee to move the Government for certain returns as to the Poor-law employment of midwives, was read; also another from the same gentleman, suggesting the preparation by the Council of a new statistical report of the profession, and a third, regretting the small result of his exertions *re* the diplomas granted by the Rotunda and Coombe Hospitals. On the subject of the Midwives Bill the committee resolved to inform the Government that the Council will not meet till May, but has forwarded a copy of the resolutions of the Council on the Bill of 1895. The committee resolved that it was not within its province to ask the Government for the returns wished for by Dr. Rentoul. Such returns would certainly be interesting, and Dr. Rentoul might induce some member of the House of Commons to ask for them. Correspondence with the Registrar-General on the easy registration of deaths without medical certification was read. The answer of the Registrar-General cannot be regarded as satisfactory, though it confirms the view of the Council that registrars do not break the law in accepting statements by unregistered persons in lieu of medical certificates. Doubtless the President will carry out the wishes of the Council and seek an interview on this subject with the President of the Local Government Board. The Registrar-General has intimated his intention to put into his official list for 1897 the names of medical practitioners and dentists which have been removed from the registers. The subject of defective preliminary educat'on was raised in communications from the Director-General of the Navy, which will be forwarded to the qualifying bodies affected. The Executive Committee through a subcommittee, will continue its attention to the subject of the disciplinary functions of the qualifying authorities. A communication from the Portsmouth Medical Union asked for an expression of the Council's opinion on the subject of "tendering" for appointments and underselling, but the Executive Committee resolved that the question raised does not fall within the statutory duties of the Council. A resolution passed by the Royal College of Surgeons in Ireland to the effect that the employment of unqualified assistants by medical men is most injurious and should be prohibited by the General Medical Council was received and entered on the minutes. In the dental part of the committee's business the chief matter was the correspondence between the Council and the Privy Council in regard to the case of Mr. A. P. Merrill, who claimed registration in the Dentists' Register both as a foreign dentist and a colonial dentist, and under Section 37 as a person articled as a dental pupil and whose articles expired before Jan. 1st, 1880. The Council had declined to register Mr. Merrill. He appealed to the Privy Council, and their lordships dismissed the appeal. The arguments will interest the dental profession, and are set forth at length in the correspondence published in the minutes.

THE AUER INCANDESCENT LIGHT AND ITS EFFECT UPON THE EYE.

SOME interesting discussion has taken place of late in regard to the effect upon the eye of the Auer incandescent light. The mantle of this incandescent system of lighting consists, as is now pretty generally known, of a network of the rare oxides (chiefly of thorium with a small proportion of cerium), which on being heated in the Bunsen flame emits a brilliant white light. As might be expected, this light is comparatively rich in the ultra-violet or chemically active rays that are identical with those in sunlight, and it has been urged that this richness in actinic rays may possibly be productive of injury to the sight. This argument appears to be based on measurements of wave lengths made by means of the spectroscope. The arc electric light, it is said, has similar effects, but of a more pronounced character. As yet there is no evidence of experience, as far as we know—and the Welsbach light has now been in use for several years—that the slightest injury to the optic mechanism where the system has been in use for domestic lighting has ever been produced; and unless a person deliberately stared at the naked light for some hours every day it would be surprising to learn that real injury could be referred to this cause. It is well known that the radiation of light downwards from the incandescent mantle is feeble, so that without a reflector or some reflecting surface at the top of the mantle, as in the ordinary way would be provided by a ceiling, much of the illuminating power would be lost. From the particular point of view under discussion this is, however, an advantage for the lighting of rooms, since reflected and not directly transmitted light is pleasanter and more agreeable to the eye, besides which in the phenomenon of reflection partial absorption takes place, so that the light becomes pleasantly diffused and of a healthy tone. In any case, if any apprehension should exist that the rays proceeding from an incandescing mantle are injurious because of their chemical activity—an activity which in sunlight gives life to the plant world—these rays could be readily and effectually filtered out by the simple expedient of surrounding the light with a tinted globe, such as red or orange, which need reduce but very little the originally high illuminating power. Even then the light is over 100 per cent. higher in illuminating value than the ordinary gas flame. Artificial light, of course, is most in request in the dark days of winter, and in that season, at the best of times, we receive but little more than eight hours' light from the sun, and then frequently it is largely filtered from its chemically active rays by the medium of a murky atmosphere. On the other hand, we enjoy in the summer just twice as much sunlight, which is then of greatly increased power, and the chemical activity of which is infinitely greater than could possibly be furnished by any known form of artificial light. Taking these simple facts into consideration we should almost expect to find in some form or other some manifestation or deterioration in the eyesight during the summer period, due to a largely increased exposure to the chemically active rays of solar light. We are not aware that any such manifestation has been observed. The argument that nature

intended us to rest from the effects of light as soon as the sun is below the horizon demands, if it can be reasonably applied at all, the rejection of all artificial means of lighting, since there can be no light of any kind of any aid to the eye whatever that can be without some chemical activity. Still less practicable does such a suggestion become when applied to the lands of the midnight sun and other places or to the arctic winter of several months' darkness. Clearly this theory could only be prompted by the consideration of the limited conditions of environment in the temperate zone. No men probably are exposed more freely and continuously to the chemically active rays of the sun than our sailors, yet their acuteness of vision and penetrative power of sight is a matter of admiration and wonder to everyone. Sunlight is by a thousand circumstances widely and uniformly diffused making it more acceptable to the eye, and during its journey to earth it undergoes an important modification, for in passing through the air it is deprived of some of the red rays, while the blue rays pass on—a circumstance which explains the azure character of the sky. In view of these facts, it is difficult to receive the theory with any seriousness that because there may be a certain proportion of ultra-violet rays in a given artificial light it is necessarily injurious. It would be a sorry thing if these same rays were for ever filtered out of the light of the sun by the medium of constant fog or cloud, as so often happens in the days of winter. Exposure to a purely elementary light, as red, yellow, or blue, does undoubtedly prove injurious either positively or negatively. The distress produced on working for some time, to quote one instance, in a red or yellow light, as in the dark room of the photographer, who employs one or other of these colours on account of their chemical inertness, is well known. Absence of sunlight is held to be synonymous with the absence of life, and the life-giving and invigorating qualities of solar light are largely, if not entirely, dependent upon the chemically active rays, and certain lines of scientific research have shown that without the great phenomenon of insolation going on day by day life would be unendurable and finally extinguished. White light, therefore, as afforded in its entirety by the sun, is a necessity of existence.

THE INTERNATIONAL MEDICAL CONGRESS AT MOSCOW.

A MEETING of the English committee was held at 13, Harley-street, W., on Feb. 13th. The following members were present: Sir W. Mac Cormac (in the chair), Sir Dyce Duckworth, Mr. Langton, Dr. Lauder Brunton, Dr. Allchin, Mr. Henry Morris, Surgeon-Major-General Hooper, Dr. Champneys, Professor Thane, Dr. A. E. Garrod, and Mr. Makins. The secretary reported that fifty members, representing the various English universities, medical schools, and medical societies, had joined the committee, and several matters relating to the Congress were discussed. The preparations for the meeting at Moscow are now in an advanced state, the programme of work in several of the sections being nearly complete. Papers may, however, still be announced, the last date being June 1st next. The secretary-general, Professor W. K Roth, announces that the English Consul, Mr. Medhurst, is in communication with the principal members of the English colony residing in Moscow with a view to the entertaining of guests to the Congress; further, that ample hotel and lodging accommodation at reasonable charges will be forthcoming. It is hoped that the members of the Congress will be received at a Court reception by the Czar, and arrangements are being made for *fêtes* to be held at St. Petersburg after the termination of the meeting at Moscow. The cost of the railway journey to Moscow, returning by St. Petersburg, will be approximately as follows: A circular ticket from London, *viâ* Paris, Strasburg, Munich, Vienna, Oderburg, and Granica (frontier station for Moscow), and home *viâ* Eydtkuhnen (frontier station from St. Petersburg), Königsberg, Berlin, Cologne, Brussels, and Calais to London, available sixty days, first class, £17 5*s.*; second class, £12 4*s.* 6*d.*; 56 lb. of baggage free to Avricourt on the out journey and from Blandain on the home journey. For the remainder of the journey baggage must be paid for. The tickets for the Russian portion of the journey must be taken at the frontier stations, the cost being as follows:—Granica to Moscow, first class, 38 roubles 43 kr.; second class, 24 roubles 68 kr. Moscow to St. Petersburg, first class, 20 roubles 76 kr.; second class, 12 roubles 21 kr. St. Petersburg to Eydtkuhnen, first class, 17 roubles 90 kr.; second class, 10 roubles 74 kr. No return tickets are issued on the Russian railways. Taking the rouble at 2*s.* 3*d.* the approximate cost of the railway travelling will thus be: first class, £26; second class, £18; and it will be necessary to give eight days' notice to Messrs. Cook in order to obtain the circular tickets. The Secretary-General holds out some hope of the fares on the Russian lines being considerably reduced. All visitors will be required to be provided with passports. Forms of inscription as members of the Congress may be obtained from Mr. Makins, 47, Charles-street, Berkeley-square, W.

LEICESTER AGAIN.

LEICESTER, unlike the heroines of modern novels, has a past of which it may well be proud. But its present seems to be given up to the fostering of every kind of fad, and, like the gentleman whose politics were summed up in the simple words, "Agin the Government," Leicester seems to be always in opposition. Its views on vaccination are well known; consignments of "cheap tans" made, not of leather, but of "compo," come from there and figured in the Whitechapel County-court last year; and now it has started another fad. There is Mr. Pickering, who claims to cure fevers by giving baths, and the Leicester Board of Guardians have intimated to their medical officer, Mr. Bryan, that they would like the Pickering system tried in cases of fever brought to the workhouse infirmary. The house committee accordingly wrote to Mr Bryan asking the following questions: 1. Whether you have had an opportunity of ascertaining the methods employed by hydropathists, particularly those used by Mr. John Pickering, and the results obtained under such treatment? 2. Whether you are of opinion that the advantages claimed for this treatment are actually obtained; whether the course of the fever can be stopped, and the risk of complications and spread of infection prevented? 3. Whether you are prepared to adopt such treatment, either permanently or as an experiment? We are both pained and surprised to see the Leicester Board of Guardians suggesting a method of treatment "as an experiment" upon patients. However, we may safely leave them to the wrath of the Personal Rights Association and the Anti-vivisection Society, and we will pass on to Mr. Bryan's answer. He wrote—(1) that he was perfectly conversant, in common with the rest of the medical profession, with the use of baths, &c., in lowering temperatures, and that Mr. Pickering professed to destroy germs by a temperature of from 102° to 110° F.; (2) that he would not trifle with human lives; (3) that he had been medical officer to the workhouse for sixteen years and had never had a single death from scarlet fever; and, finally, that he would not allow any interference with his treatment, for which he alone was responsible. These obvious truths pained the house committee, and the clerk wrote back saying, among other matters, that "your statement that Mr. Pickering claims to destroy such fever germs as you refer to by means of baths is not correct."

Now some time last year Mr. Pickering was interviewed at Leicester, and we published portions of the interview in our issue of Jan. 2nd, 1897. There Mr. Pickering was reported as saying: "Extremes of temperature are destructive of germ or organic life in the blood. Cold water at 36° F., or hot water at 102° F., are conditions under which no fever can live." Supposing Mr. Pickering to have been rightly reported—and our quotation has never been contradicted—these words can only mean that Mr. Pickering considers that germs can be destroyed by a temperature of 36° F. or 102° F. The letter also asked if Mr. Bryan would watch some cases now being treated by Mr. Pickering. To the second letter Mr. Bryan replied that he would have nothing whatever to do with Mr. Pickering or his treatment, that he would not argue a purely medical subject with anyone outside the profession, and that he hoped Mr. Pickering and his admirers would find some other way of airing his fad than on the sick poor who are not their own masters. At the meeting on Feb. 16th some resolution of the committee was adopted *nem. con.* We do not know what the resolution was, but apparently the "system" is being adopted in the town. Mr. Bryan has protested in vain; it remains for the Local Government Board to do its duty. There is one cheering incident in connexion with this exhibition of folly, and that is that Mr. Pickering has been summoned under the Public Health Act for unlawfully exposing a patient suffering from scarlet fever by removing her in a hackney carriage on Jan. 11th. The Bench decided to convict and fined Mr. Pickering £2 and costs.

HAZARDOUS COMMODITIES.

WE have frequently expressed the opinion that the Government would sooner or later have seriously to consider the question of placing under proper control certain new and rapidly developing sections of chemical industry. Several more or less dangerous articles of chemical manufacture are becoming so largely employed in our midst for a variety of useful purposes now that some restrictions as to their sale, conveyance, and storage are, in the interest of the public safety, imperative. In this opinion we were not mistaken. Certain substances that were previously regarded as chemical curiosities have ceased to be so, and are now important commercial commodities and made on a very large scale. Thousands of gallons of "liquid" carbonic acid gas in steel cylinders under high compression may now be seen every day being conveyed in carts from place to place, and similarly other gases are stored under pressure in "tubes," as, for example, oxygen, hydrogen, nitrous oxide, and so on, all of which may expose the public to danger. Solid bricks of metallic sodium, again (kept under naphtha, of course), are every day carried from port to port as part of a ship's cargo, and very serious accidents have occasionally arisen from the intermixture of various chemicals on board ship by the damaging effect of a rough passage upon the packages. The trade in cylinders of compressed gases has already been placed under control. Still another chemical substance of comparatively recent discovery is now so extensively used as to have given rise to the necessity of a Home Office Order being recently issued. We refer to carbide of calcium, which on simply becoming moist gives off the exceedingly inflammable gas acetylene. Carbide of calcium is useful for a variety of purposes, but chiefly because on simply placing it in water it evolves pure acetylene, which possesses a remarkably high illuminating power. The employment of this method of generating a gaseous illuminant for optic lanterns, for photographic purposes, and for lighting private dwelling-houses has already been tried. It is quite obvious that some restriction should be placed upon the sale and storage of this substance, which is now being manufactured on a large scale, and which simply in a moist atmosphere gives off an inflammable gas which with air forms an explosive mixture. Carbide of calcium is now to be brought under the 14th section of the Petroleum Act, 1871, and after April 1st, 1897, it will be unlawful to keep carbide of calcium except in virtue of a licence to be obtained from the local authority under the Petroleum Act. Doubtless the recent accidents that have been reported from time to time by the employment of acetylene in this way have prompted the Home Office to issue this Order, together with a memorandum showing the character of the risks to be guarded against, and giving suggestions as to the nature of the precautions likely to be most effectual for securing safety.

SANITATION IN HUNGARY.

THE *Gyógyászat* of Budapest publishes a series of articles by the Government sanitary inspector, Dr. Jerö Farkas, on the Prophylactic Measures and Treatment of the Plague should it unfortunately reach Hungary through Turkey or Russia. Dr. Farkas has evidently been careful to follow the literature of the epidemic, and has deduced therefrom his conclusions. He estimates quarantine at its proper value—as worthless and mischievous—and insists that it is the duty of the authorities in Hungary to seriously consider and to carry out without further delay the all-important improvements in respect of dwellings, food, and general hygiene of the poorer classes. He warns the public, and particularly the medical profession, against the mischievous supposition which seems to have been adopted in some quarters as an excuse for doing nothing, that the plague bacterium is the primary cause of the epidemic and that if that be prevented from entering Europe other measures are of secondary importance. Views on hygiene, as expressed in the medical press of Hungary, coincide with those of our own. Poverty and its accompaniments of dirt, unwholesome food, and insanitary and overcrowded dwellings are hotbeds of all zymotic diseases and foci of epidemics. The high mortality and the alarming increase of tuberculosis testify to the insanitary evils present in a high degree at Budapest, and until these are seriously taken in hand and remedied they will remain a standing danger to public health, from which the inhabitants of the splendid palaces in the Hungarian metropolis will not be spared.

PREVENTION BETTER THAN CURE.

A CORRESPONDENT writes:—"In spite of all our stringent efforts to stamp out infectious diseases our large day schools are still well known to act as foci of epidemic disease. That children should be herded together, some of them possibly in the incubating stage of disease, without any medical supervision, seems incredible in the present state of science. The mere detention of a child from school from an infected house where a disease is already developed is not sufficient. Why should there not be in all our large day schools a daily medical inspection, or 'health parade,' every morning or afternoon? Local practitioners might be found in every district surrounding a day school who would, in consideration of an annual payment, devote an hour every morning or afternoon to this health inspection. The children might be placed in rows, down which the medical inspector might walk. An observant inspector would probably see at a glance signs of malaise or indisposition in a child. Such a child might be told to 'fall out,' in order that he or she might be more fully examined afterwards. Those who had passed the inspection might be told off at once to begin their classes, so as to delay the work of the school no longer than absolutely necessary. The time taken up by the inspection would, of course, vary with the size of the school

In cases of very large schools two or more medical inspectors might be employed. With regard to payment, the plan would have to be worked out in detail, as this only claims to be a 'suggestion.' In dealing with endowed schools there would be comparatively little difficulty. A board school medical inspector might be paid out of the rates. One attending a high school might be paid by means of an extra 4*s.* or 5*s.* per annum being charged. Parents would probably not grudge some small sum for the greater feeling of security against infection being brought home from school to younger brothers and sisters." The suggestion is one that is eminently sensible, and can only possibly be objected to on the score of expense. Yet if ratepayers would only bear in mind that the prevention of epidemic disease is far more economical than its dissemination, that objection could not be sustained; whilst school managers and parents would welcome the introduction of a system which would safeguard their pupils and children from infection.

TUBERCULOUS MENINGITIS AFTER HEAD INJURY.

EVERYONE who has seen many cases of tuberculous meningitis must have been struck with the frequency with which the symptoms come on after injury; but it is not often so easy to connect the two as in a case recently published by Dr. Buol and Dr. Paulus in the *Correspondenzblatt für Schweizer Aerzte*, of which an abstract appears in the last number of the *Neurologisches Centralblatt*. A young, strong man, aged twenty-eight years, received during a fall an apparently insignificant head injury. Immediately after he developed headache, slowing of the pulse, aphasia, and finally unconsciousness, and he died fourteen days after receiving the injury. At the necropsy there was found very distinct tuberculous meningitis over the convexity of the brain, and in the centre of the tuberculous area were found two splinters of bone from the inner table. The tuberculous nature of the disease was confirmed by microscopic examination. The patient had suffered in 1893 from right-sided pleurisy and apical catarrh, and it seems almost unreasonable to doubt that the injury in this case was the means of determining the local outbreak of the tuberculous process in the brain.

"PESTIS MINOR."

IN "Some Remarks on Plague," which Dr. Lowson contributed to THE LANCET of Feb. 13th, the interesting question is raised as to the nature of certain glandular swellings which occurred at Hong-Kong during the recent outbreak of plague in that island. Dr. Lowson is disinclined to argue with Dr. Cantlie that the glandular swellings to which Dr. Cantlie referred in his paper before the Epidemiological Society were of the nature of "pestis minor" or "pestis ambulans." Dr. Lowson differentiates in these terms between these two forms of "pestis." "Pestis minor is that bubonic disease which occurs (?) before an outbreak of plague, while pestis ambulans is the designation applied to glandular enlargements occurring during or after an epidemic which may probably be due to a less potent infecting power." As to the existence or non-existence of "pestis minor" or "pestis ambulans" in Hong-Kong, we can but rely upon those observers who were present during the outbreak, and it is unfortunate that there is this difference of opinion. There can, however, be no doubt that the existence of anomalous glandular swellings during prevalences of bubonic plague is recognised by many observers and by most writers, and that there should be these anomalous expressions of the plague is what upon general epidemiological grounds is to be expected. One of the best known instances where these glandular enlargements were seen was in the outbreak of plague which occurred in Mesopotamia in 1876–77, and of which a most interesting account may be found in part 11, vol. iv. of the Transactions of the Epidemiological Society. The account is written by Dr. E. D. Dickson, physician to the British Embassy at Constantinople, and is compiled largely from the notes of Dr. Giovanni Cabiadis, which were made by him as the result of his observations at Hillat and Bagdad. In this account Dr. Dickson thus writes as to the history of the outbreak:—

"Two or three months previous to the manifestation of plague in Mesopotamia *glandular swellings free from fever* prevailed in that country. They showed themselves in the groin, armpit, or neck, and were not accompanied by other symptoms. They began to appear amongst the inhabitants about the end of autumn and continued through the winter, but towards the end of it the plague broke out and reached its acme of intensity in the spring. ..... On the cessation of the plague *apyretic glandular swellings* re-appeared again precisely similar to those which had preceded the outbreak, and they continued to manifest themselves for about two months longer. These glandular swellings were frequently met with and were distinct from the chronic adenitic swellings met with in subjects of scrofulous tendency and evidently unconnected with any special diathesis."

It is "pestis minor" or "pestis ambulans" in the above sense which the medical officers of health in such of our ports as have communication with India will do well to be on the look-out for.

"THE EMPIRE AND THE ARMY."

UNDER this heading the *Spectator* of Feb. 27th has an article with the spirit of which we quite agree. *Apropos* of the proposal to restore the name of the Royal Canadian Regiment and place its depôt at Toronto, our contemporary says it would like to see the territorial system extended to the colonies in order to make them feel that they form a part with this nation of one and the same great organism and are taking their place under a common flag. For this purpose it is suggested that the depôt of a British regiment might be located in Australia, New Zealand, and the Cape, in addition to one in the Dominion of Canada. Setting aside the idea, which is probably destined to develop until it becomes a dominating idea, of a confederated Empire in which all shall bear a part, we should be in this way widening the area of our recruiting ground, and this is very desirable and will soon become necessary if the growing responsibilities of British rule are to be fulfilled. Our Army is a volunteer army and not maintained by conscription. When work is plentiful recruits are scarce; when it is slack recruiting is brisk. But the Army establishment is fixed by Parliament and cannot be exceeded, and the consequence is that we are constantly shifting the standard of physical requirements according to the state of the labour market, instead of taking recruits when we can get them of the most desirable kind. The British Army, it is true, shows no decadence of enterprise and courage. We have had numerous expeditions and little wars of late in which our soldiers and sailors have borne themselves as well as ever they did, but on physiological and medical grounds it is obviously very desirable that we should attract an increasing number of intelligent and enterprising young fellows of superior physique into our Army. This proposal promises to open out a way of effecting this object. Of course, there are difficulties of an official and financial nature to be overcome, but they are surely not of an insuperable kind. If we could manage to weld our colonies into closer connexion with us and get them to bear their share of responsibilities which are mutual and common to both all anxiety about the maintenance of land and sea forces on a scale adequate to our requirements would be dissipated. The statesman who could devise a scheme for accomplishing this, by opening out a career in the Army and Navy for our young colonists, or, in other words, by suggesting a method by which each of our large English-speaking

colonies and dependencies should contribute its quota to the strength of the Army and Navy, would most deservedly make for himself a great reputation. We believe that it could be done, and the trend of things goes to show that one day it will be done.

"EARTH TO EARTH BURIAL."

SIR F. SEYMOUR HADEN contributed a paper on "Earth to Earth Burial" last week at a meeting of the Church of England Burial, Funeral, and Mourning Reform Association, held at the Westminster Palace Hotel. Mr. H. D. Greene, Q.C., M.P., presided. Sir F. Seymour Haden in the course of his paper said it was absurd to enclose the bodies of the dead in hermetical enclosures, which only hindered nature's process. Properly buried the body rose from the grave in the form of elements necessary for the renewal and growth of plants. In the case of a body buried a foot deep this process was accomplished in a year, and in the case of a greater depth at about the rate of another year for every foot of depth.

BIRMINGHAM AND THE DIPHTHERIA EPIDEMIC.

WE congratulate the gentlemen who attended the meeting held at the Birmingham Medical Institute, under the circumstances described by our Birmingham correspondent in our present issue, upon the eminently satisfactory result of their deliberations. A disease so generally fatal and so insidious as diphtheria should be met and fought in every possible way, and the sooner it is attacked the sooner it will be overcome. Prompt isolation, which connotes prompt diagnosis, is the first line of defence, and the use of a genuine anti-toxic serum at the earliest possible moment is the chief weapon of attack. If Birmingham, as she is apparently going to do, provides herself with these munitions of war against disease, she may possibly reduce diphtheria to a vanishing point.

HEMIANOPSIA IN ABSCESS OF THE BRAIN.

AN interesting case is related by Lannois and Jaboulay in a recent number of the *Gazette Médicale de Paris*, in which the prominent symptoms were alexia, agraphia, word-blindness, right-sided hemianopsia, and facial paralysis. Ear disease was present, and the symptoms pointed to the presence of abscess. No pus was found at first on operating, but three weeks later puncture was again tried and a collection evacuated. Eleven days later the patient died, and a large abscess was found in the centre of the left occipital lobe and diffuse encephalitis affecting the central and frontal convolutions of the left hemisphere. There was also a small purulent collection in the third frontal convolution. The points in the case which are of special interest are that pus was not found on the first occasion, a mishap which the writers ascribe to a blocking of the hollow needle with which the puncture was made. The second point is the presence of hemianopsia, and they rightly insist upon the importance of looking for this symptom in all cases of suspected abscess. It is not unfrequently present.

RAPIDLY OCCURRING HEMIPLEGIA IN ACUTE LEAD POISONING.

DA COSTA[1] relates the following case. The patient was a woman, aged thirty-five years, in good health. Some rooms in the house, but not her bedroom, were painted, and the house became filled with the odour. From the first she complained o headache, which became so severe in three days that her medical attendant was summoned. He found that her speech was thick, the tongue slowly protruded and deviated to the right, and that there had been vomiting. Movement of the right arm and leg was much impaired, especially of the latter. This had been preceded by numbness. The loss of power increased and she was forced to remain in bed. Shortly after the right side was affected, numbness and a sense of coldness on the left side were noticed, but never motor weakness. Four weeks after the attack, when he saw her, the right arm could be feebly moved, but the grasp was very weak and the leg powerless. There was no wrist-drop, foot-drop, tremor, or muscular atrophy. No facial paralysis existed, and the tongue was protruded straight. The knee-jerks were exaggerated, especially the right. There was an increased reflex in the forearm both on tapping the flexors and extensors. There was no anæsthesia or tender spots in the course of the nerves. Tactile sensations were well preserved in the hands. With a strong light a bluish line was found on the gums, especially round the lower left incisors. Iodide of potassium and sulphate of magnesium were prescribed, and she gradually recovered. The case is remarkable in many respects. The onset of paralysis three days after exposure is unprecedented. Tanquerel des Planches[2] mentions three cases in which it occurred in eight days. The form of paralysis—viz., hemiplegia—is the rarest of all. The absence of hemianæsthesia, as far as could be observed, is unusual; so is the affection of the nervous system without preceding colic. In 102 cases Tanquerel found this to have happened in only fourteen.

[1] American Journal of Medical Sciences, February, 1897.

PROFESSOR KOCH'S RESEARCHES ON RINDERPEST.

IN a report to the Cape Secretary for Agriculture, dated "Kimberley, Jan. 31st, 1897," Professor Koch gives an account of his investigations upon the rinderpest up to that time. He first shows that the micro-organisms discovered by Dr. Edington cannot be the cause of the disease, since inoculation with cultures of these microbes did not produce any effects and, further, animals so treated were found to be just s susceptible to subsequent inoculation with rinderpe blood. His experimental inoculations on sheep and goats, carried through several generations, did not result in any evidence that the virus had been markedly attenuated by this process; indeed, it would rather seem as if, so far as the sheep were concerned, the cultivation rather increased the virulence than diminished it. On the other hand, in the goats there was evidence of a slow attenuation. His observations upon these animals have led him to the belief that in farms infected by rinderpest sheep and goats may at first contract the disease in so mild a form as to escape notice, and that the disease becomes more virulent by being continuously propagated through these animals. This view would explain the discrepant statements made as to the liability of sheep and goats to be attacked by the disease. He found that rinderpest blood mixed with glycerine or with phenol lost its infective property, and that although in the case of an animal inoculated with the glycerine mixture the animal was still susceptible to the disease, there was a marked resistance to the effects of subsequent inoculation with unmixed rinderpest blood in an animal treated with the phenol mixture. Dilution with distilled water or normal saline solution carried even to an extreme degree did not appreciably affect the virulence of rinderpest blood. Desiccation of the rinderpest blood did, however, deprive it of its infectivity. The most interesting part of this report is that where Professor Koch shows that animals who have recovered from an attack of rinderpest are not only themselves immune from the disease, as proved by their being unaffected when inoculated with rinderpest blood, but that the blood of such immune animals exerts a protective power—for an animal

[2] Traité de Maladies de Plomb, tome ii., p. 19.

"vaccinated" with the serum and blood from the immune animal proved to be insusceptible to inoculation with a large quantity of rinderpest blood. He states that further observations will be necessary before he is in a position to say how long this period of immunity can endure or whether it is possible to produce it artificially. He has not been able to find any other animals than ruminants susceptible to rinderpest, numerous experiments having been made with negative results on various species of birds and rodents. Dogs, too, are perfectly immune; but he had not completed his observations upon the pig in reference to this point. In an issue of the *Cape Times* which appeared after the number containing the text of Professor Koch's report there is some interesting correspondence between Mr. H. A. Lawrance, F.T.C., and the Secretary of Agriculture, carried on in October and November of last year, in which it appears that Mr. Lawrance, observing the immunity from a second attack possessed by animals which had recovered from one attack of rinderpest, had suggested that the blood of such naturally immunised animals might be used as a protective agent, a suggestion that is shown by Professor Koch's experiments to be supported by fact.

STRIKE OF BUTCHERS IN ROME.

THE Rome correspondent of the *Times* says that the butchers in that city have struck as a protest against the slaughter of horses for food. Great inconvenience has arisen and the price of meat has much increased, so that the poor are suffering greatly. There are one or two municipal slaughter-houses, but these are quite insufficient to supply the necessary amount of meat, and the strike is extending to other dealers in food. This is certainly a serious state of matters. There can be no possible objection to eating horse-flesh if the same precautions for procuring it sound and tender are taken as obtain in the case of ox-flesh. But the fact remains that horses used as food have generally died either from disease or have been killed to prevent them dying from accident or overwork, and the flesh of such cannot be wholesome. We have no statistics at hand of the quantity of horse-flesh consumed in Rome, but we fancy it cannot be very great, and perhaps it would be wise of the municipality to prohibit its use altogether as human food, on account of the hygienic dangers to which we have referred above.

THERAPEUTICS OF THE X RAYS.

So far the clinical value of radiography has been mainly, if not entirely, diagnostic. There are some observers, however, who, in spite of apparent discouragements, have not lost faith in its ultimate usefulness as an instrument in the actual treatment of disease. They recall the fact that in whatever way it may act sunshine (and particularly the violet rays of the solar spectrum) has been reasonably credited with a germicide property, and they expect the same result from the ultra-violet and chemically active x rays. Unfortunately for the support of this theory experiments conducted by various observers to show the action of these rays on different germ-cultures have yielded contradictory results, and have not, on the whole, confirmed the expectation that the microbes could be weakened or destroyed in this way. On the other hand, some results of clinical observations are more encouraging. The experiments conducted by Professor Lortet of Lyons and published in June of last year[1] belong to this category. In these experiments two series of guinea-pigs were inoculated with tubercle. Glandular enlargements, suppuration, and general illness followed in those not exposed to the rays, while in the others which were irradiated for an hour daily during twenty-five days no such effects were observed and the animals even gained flesh. Dr. E. Ausset, after a failure to diminish by means of the rays the activity of tubercle bacilli in a virulent culture, recently employed the same method in the treatment of a long-standing case of pulmonary and abdominal tuberculosis.[2] The patient was a child aged seven years. Her abdomen was exposed to the rays and regularly treated thus during three weeks for an hour daily. During this period she improved in general condition and gained in weight. The treatment had then to be discontinued for want of apparatus. At once there was a change for the worse in the patient's condition, and she died three weeks later. A necropsy showed evidence of advanced pulmonary phthisis with miliary tubercle in the peritoneum and caseation of the mesenteric glands. In such a case the distinction between effects *post hoc* and *propter hoc* is not easily drawn. At the same time it is to be remembered that in this instance the disease was well advanced, and that nevertheless the action of the x rays was followed by apparent benefit not otherwise accounted for. The subject is worthy of more attention than it has yet received, and Dr. Ausett's suggestion that radiography (which should be prolonged for a considerable period) may stimulate tissue resistance, and may prove distinctly useful in a case taken early, should not be too lightly set aside.

[1] Académie des Sciences.

"WALLACE-ISM!"

WE are delighted to see that the man Wallace, upon whose little ways we commented in our issue of Feb. 20th, has been mulcted in the sum of £20 12s. under the Pharmacy Act of 1878 for selling a poisonous drug to a person not known to him, without inquiry, without entering the fact of such sale in a book, and without being a chemist registered for the sale of such drugs. The prosecution was instituted by the Treasury, and arose out of the death of a person after taking some of "Wallace's Specific No. 1." Dr. Luff, having been supplied through the agency of a detective with a bottle of No. 1, said that on analysis the bottle proved to contain a considerable quantity of aconitine, so much so that one-sixth of an ounce would probably prove fatal. If the strength of the Pharmacopœia tincture of aconite was taken as 1, the strength of the specific would be represented by $\frac{1}{4}$. On the other hand, Mr. J. B. Cuppock, analyst to the Lancashire County Council, said that according to his analysis an ounce bottle only contained $\frac{1}{1\frac{1}{6}}$th of a grain, but he admitted that this was the first practical experience he had had of aconitine. Eventually Wallace was fined in the amount mentioned above. This is some consolation, but the proper punishment for all quacks would be to make them take their own nostrums. In the majority of cases they would suffer but little harm, for most of the quack medicines are inert or, at best, somewhat aperient; in this case, however, the result might have been different. The proprietors of inert patent medicines should be fined, say, in thousands for deceiving the public by their advertisements.

OPERATIVE TREATMENT OF SPINAL CURVATURE.

CHIPAULT'S treatment of caries of the spine has been recently described in the *Therapeutische Wochenschrift*. A longitudinal incision is made over the spinous processes, so as to extend well above and below the limits of the curvature. When the processes are exposed and the soft parts drawn aside the spine is straightened as much as possible by an assistant, who pulls it into its proper position. This being done, a silver wire is passed through the interspinous ligament above the highest process to be ligated, at the bottom, near the root. The wire is then cut, leaving on

[2] Journal de Clinique et de Thérapeutique Infantile, Feb. 11th.

each side a piece twice as long as the wound. The spine is then laced up with these two ends, crossing them backwards and forwards and passing them through each interspinous ligament from the highest process downward until the lowest is reached, when the two crossed ends are twisted together. The wires must be passed through the ligaments close to the lower edge of the process above, so as to afford as firm a support as possible. The soft parts are then sutured without drainage, the wound bandaged, and the patient put to bed. This method is only applicable to moderate curvatures of recent origin, and cannot be used in long-standing curvatures or those involving many vertebræ, but the presence of an unopened cold abscess or of paralysis is said not to contra-indicate these operative measures.

SHERE EXTRAVAGANCE.

SEVEN years ago it was thought that the parish of Shere, near Guildford, ought to be drained. Difficulties blossomed like the proverbial flowers in May. A Local Government Board inquiry was held in November, 1890; another in April, 1891; and another in May, 1891. Item, £118 7*s.* 9*d.* Another inquiry was held in September, 1893—in the meantime nothing apparently happened—and a fifth in October, 1893. Item, £108 17*s.* 6*d.* Then there was another slumber until November, 1895, when a sixth inquiry cost £54 19*s.* 6*d.* Just a year later a seventh inspector "inquired," and as yet only £7 5*s.* 8*d.* has been paid for this last little luxury, but the big bill has not come in. However, in February, 1897, the Council has received permission to borrow £950 to pay for the drainage. They have already spent £290 on preparations.

A PURVEYOR OF GARBAGE.

MR. CHARLES CARRINGTON is a person who describes himself as a "publisher of medical folk-lore and scientific works." We do not know in which category he would place a book which he has had the insolence to forward to us for review, bearing the innocent title of "Untrodden Fields of Anthropology." We are not going to accord this work the honour of a review unless Mr. Carrington likes to consider what follows in the light of such. The book, said to be written by a French army surgeon, is solely a record, and a very badly written record, of garbage from the sewers of human nature. It has no scientific importance whatever. It is of no interest to the student of human nature or of natural history. We shall be happy to supply the Paris police with Mr. Carrington's address and to hand over the book with its accompanying prospectus to Her Majesty's Postmaster-General, so that he may, if he will, take steps to stay the dissemination of such abominations by the agency of his department.

PULSATING VESSELS IN THE PHARYNX.

THE recognition of this very rare condition is of importance to all surgeons. Otherwise the use of a bistoury in a case of tonsillar or retro-pharyngeal abscess or the performance of tonsillotomy may be disastrous. McBride[1] has seen only three cases of abnormal pulsation in the pharynx. The first was that of a woman aged sixty-seven years. Both pillars of the fauces pulsated. By digital examination a large arterial trunk could be traced across the posterior pharyngeal wall. The second was the case of a man who showed a fluctuating and pulsating tumour in the region of one tonsil, which was suspected to be aneurysmal, but which was a cyst resting on the carotid artery. The third was the case of a female aged sixty-one years. Pulsation was seen at the junction of the posterior pharyngeal with the lateral wall on each side. The right vessel was seen to a less degree than the left, which latter extended more towards the middle line. On the other hand, the pulsation on the right side was communicated to the corresponding tonsil. The condition of the circulatory system in general was abnormal. There were epigastric and episternal pulsations, a systolic aortic murmur, and accentuated second sound. The carotid, subclavian, axillary, and brachial arteries showed marked pulsation. The right radial was abnormal, crossing to the back of the forearm superficially to the supinator longus. There was also pulsation in the abdomen, and the posterior tibial arteries and dorsal arteries of the foot. On the skin were some small rævi as well as a tendency to diffused but patchy dilatation of the capillaries. The largest number of vascular anomalies of the pharynx have been recorded by Farlow[2]—viz., thirteen cases. All the patients except one were females, and their ages varied from seventeen to sixty-eight years. The pulsating vessels varied in position from half way between the uvula and the sides of the pharynx to the extreme right or left.

[1] Edinburgh Medical Journal, December, 1896.

SOME DEFECTS OF LONDON HOUSES.

DR. G. V. POORE holds a recognised position among authorities on practical hygiene, especially in connexion with a process for dealing with the sewage question as it presents itself in country districts. The difficulties of this problem are sufficiently familiar both in villages and in isolated houses, but Dr. Poore claims that he has satisfactorily solved them, and explains his system in his "Essays in Rural Hygiene," a very interesting book, embodying the results of several years' practical experience. In an address on the Dwelling-house, delivered at the London Institution, Finsbury-circus, on Feb. 4th, he showed that it was quite possible for a country householder to make himself independent of the sewerage arrangements devised by the officially constituted local authorities. Modern methods of sanitation as applied in towns are, according to him, attended by the serious disadvantage that they give a fatal facility for overcrowding which is certain eventually, if not checked, to do more harm than the sanitation has done good. The most obvious defects of the better class of London houses were, he said, their extreme height in proportion to the space on which they stand, the dark, underground basements, the absence of back doors for the delivery of goods or the removal of refuse, the ill-ventilated staircases, and the close "areas" shutting in the gullies leading to the sewer. The cost of London houses was also steadily increasing; an instance quoted from Marylebone showed that the rates had risen 87 per cent. in twenty-three years, and that the aggregate of the rent, rates, water-rate, and taxes amounted to over £2 per annum per square yard of occupied land.

A CASE OF QUINTUPLETS.

IN our issue of Feb. 27th (p. 590) Mr. Edwin T. Goode of Doncaster published a case of quadruplets which occurred in his practice, and we have since found that a case of quintuplets is recorded in the *Medical and Surgical Reporter* of Feb. 13th by Dr. S. J. Mathews of Mayfield, Kentucky, who states that on April 29th, 1896, he "delivered Mrs. Oscar D. Lyon of five boys, weighing respectively in the order of their birth four, four and a quarter, four and a quarter, four and a quarter, and five pounds. At birth they seemed perfectly healthy, and there was no apparent cause why they should not have lived, but for some reason they failed in health and died one by one. May 4th, at 3.20 P.M., the smallest one died, having lived only four days, seventeen hours, and twenty minutes.

[2] Boston Medical and Surgical Journal, vol. cxvi., p. 302, and vol. cxxiii., p. 6.

The second followed May 11th at 6.30 A.M., eleven days, eight hours, and thirty minutes after birth. The third died May 12th, at 11.30 P.M., aged thirteen days and two hours. May 13th, at 2.30 P.M., the fourth died, having lived thirteen days, eighteen hours, and thirty minutes; and the fifth died May 14th, at 12.30 P.M., at the age of fourteen days, two hours, and thirty minutes. All have been embalmed and will be put on exhibition for the benefit of the family, who are very poor. The mother was almost helpless for about three months before her confinement, which took place at a little over the seventh month of her pregnancy. There was one placenta, which I had photographed and preserved in alcohol. The mother has not regained her strength at this writing. Her normal weight is 112 pounds, and her height five feet one inch. She has a very dark complexion, as also has her husband. I have been their family physician for eight years, having been frequently in attendance." Dr. Mathews adds that both parents were born in Kentucky, the father in 1849 and the mother in 1857. They were married in 1874, and moved to Mayfield, Graves County, Kentucky, in 1888. They had had seven children before the birth of these five boys, the oldest of these being now over twenty years and the youngest two and a half years. The same journal also publishes a confirmatory letter from the Rev. D. F. Kerr of Mayfield, who baptised the five children.

THE RESPONSIBILITY OF PUBLIC BODIES.

ONE of the cases tried at the Hants Assizes recently was a claim in the Nisi Prius Court by a gentleman named Dent against the corporation of Bournemouth. Mr. Dent claimed £1000 as the result of damage to his property owing to the defective arrangement of the corporation's drains. He bought an estate in the valley known as the Burwood Glen in 1894, and from July of that year he was subject to a constantly recurring nuisance owing to the overflow of the sewer. Every time there was an ordinary rainfall, he said, his lawns and gardens were flooded and on the water draining off a filthy sediment remained. The cause, it was contended, was that two other drains had been connected with the sewer complained of. This was of 15 in. and 18 in. diameter, but in one place only 12 in., hence the trouble. For the corporation it was pleaded that the spot, being low-lying, was always liable to flood, and that nothing was done from 1894 until a recurrence in 1895, when, however, the necessary work was carried out. Afterwards plaintiff's garden was put in an even better state than before by the corporation's own men at a cost of £60. The sediment complained of was like that to be found on a road where a gully was blocked. In the end, however, the jury found for the plaintiff with damages at £170. We do not quite see how the sediment complained of could be like "that to be found on a road when a gully is blocked," for that sediment is only composed of road-sand and possibly horse-droppings, whereas water which overflows from sewers leaves a sediment containing all kinds of filth. It is possible that the plaintiff's garden will be found to have gained in fertility by the sewage manure, but any way we think he was fully entitled to the damages he was granted.

BIRMINGHAM AND THE FOOD AND DRUGS ACT.

THERE are some interesting items contained in that section of Dr. Hill's report dealing with the adulteration of food and drugs in the city of Birmingham for the last quarter of the past year. The proportion of articles adulterated was 24 per cent., but 15 per cent. of these were regarded as adulterated owing to the presence of preservatives. In this direction the committee appear to have taken very active measures recently and with interesting results. The following articles proved to be preserved either with salicylic or boric acid "cream," "ham and tongue," "German sausage," "Sheffield polony," "pork pies," "pickled tongue," and sundry samples of jam. An examination of certain sweetmeats disclosed the fact that "Coconut chumps" and "Woodbine cigarettes" were adulterated with from 2½ to 6 per cent. of paraffin wax. We have on a former occasion commented upon this objectionable practice. Finally, Dr. Hill found that a sample of chlorodyne lozenges contained no morphia, but as there is no legal standard for it he was not able to certify it as adulterated. We presume, of course, that the lozenges were purchased at the shop of a registered druggist, as otherwise had the lozenges contained morphia it would have been a proper case for bringing to the notice of the Pharmaceutical Society.

A MALFORMED TIGER'S SKULL.

ON Jan. 16th we described a series of cases dealing with irruption of teeth into the nasal cavity. We have received from Mr. Phipson, the honorary secretary of the Bombay Natural History Society, a copy of the journal of the society of Jan. 12th, which contains a letter from Captain R. Wapshare of the 3rd Lancers, describing this curious malformation as having taken place in a tiger:—

"Last hot weather," writes Captain Wapshare, "I shot a medium-sized tiger, and on examining the head I found that both canine teeth in the upper jaw were missing. The right canine tooth had evidently become decayed, as there was a hole running right up into the root of the tooth. The place where the left canine tooth should have been was perfectly smooth and covered over with the gum. It looked as if the tiger had never grown this tooth at all. I thought no more of the matter at the time, and the skull has been put away with others ever since. Yesterday I took several tiger skulls out and put them to soak in cold water previous to cleaning them, and my attention was drawn to this skull. On examining it closely I found a large canine tooth lying inside the cavity of the nose. I could only take it out with a great deal of difficulty, as it was well covered with thin bone. The tooth is a large one, but is deformed, and the point is worn rather fine, as if it had wasted away. The tooth had evidently been forced back through the socket and must have been in this state for some time because the base of the tooth had become deformed. It must have originally been in its normal position in the jaw, as it shows the enamel as in an ordinary tooth, and this also goes to prove that the injury took place after the animal was full grown. I may mention that in order to remove the tooth I had to extract it through the nose."

TYPHOID FEVER DISSEMINATED BY A DRINKING FOUNTAIN.

THE localised outbreak of typhoid fever in the town of Halstead, a report of which by the medical officer of health for the county (Essex) will be found in another column, is of considerable interest, inasmuch as the origin has been traced to the use of water supplied by a public drinking fountain which had become specifically infected with the sewage from an isolation hospital in which there were patients suffering from typhoid fever. That the outbreak was not of a much more serious character was due to its occurrence during the very cold weather, when drinking fountains are little resorted to, and to the very commendable promptitude of Dr. Gordon Roberts, the medical officer of health, in plugging up the tap immediately his suspicions were aroused. This water had been observed to become turbid after the heavy rains of Dec. 2nd and 4th, indicating that the supply was liable to pollution. The District Council ordered a sample to be analysed, but as a "fine weather" sample was selected for this purpose very little organic matter was detected and the analyst reported that he did not think any suspicion could be attached to the water. Dr. Roberts did not regard this as satisfactory, and

the county medical officer was consulted. He pointed out the absurdity of relying upon such an analysis and the danger of acting upon the report. He asserted that the mere fact of the water becoming turbid after a heavy rain was in itself a proof of intermittent pollution, and recommended that the cause should be immediately ascertained. With some reluctance this advice was acted upon, and it was then discovered that the fountain water was being from time to time polluted with the sewage from the isolation hospital. It is to be regretted that some analysts still persist in giving opinions as to the safety or otherwise of drinking waters submitted to them for examination based merely upon the results of their analyses. This practice cannot be too strongly condemned. In this particular instance no analysis of a "fair weather" sample could justify an opinion that the water was free from suspicion. Fortunately, however, the common sense of the medical officer of health had more influence than the analyst's opinion; and an epidemic, which might otherwise have become serious, was nipped in the bud.

A MINISTRY OF HEALTH.

WE have been asked to comment on a proposal that a Minister of Health should be appointed and that his department should include the following: (1) The Registration department; (2) the Local Government department; (3) the Factory and Workshop department; (4) the Analytical and Chemical department; (5) the Veterinary department; (6) the Public Works and Prisons departments; and (7) the Lunacy department. The proposal we believe to be generally sound, except that we recognise that as an "interest" a strong claim could be made for the veterinary department to retain its connexion with the Board of Agriculture. On the other hand, however, there is increasing evidence of relationship between the health of human beings and the health of the lower animals, and for the purposes of progress of knowledge as to this relationship, and particularly for the purposes of the institution of a proper and sufficient health administration, there would be distinct advantage in the association of the veterinary department with the Minister concerned in the protection of human health. But it is not clear to us on what grounds it is proposed to bring under the control of the same Minister the functions of the Office of Works, though some re-arrangement of duties might, of course, have to be made. There is another office which must eventually be made, which must be thought of in connexion with this subject, viz., that of the Medical Officer of the Government. At the present time Dr. Thorne Thorne ably fills the office of Medical Officer of the Local Government Board, but for all purposes of making international arrangements for the prevention of disease the Government has no adviser. At the present moment Dr. Thorne is acting in this capacity in Venice, but by no stretch of imagination can this be regarded as one of the functions of the Medical Officer of the Local Government Board. The Foreign Office has obviously to borrow from the Local Government Board the officer who is appointed for an entirely different purpose. With any constitution of a Ministry of Health we presume there must be also a re-arrangement of this branch of the work of the Foreign Office. Among the proposals on which we are asked to comment is one that the Minister of Health should be appointed for life—that is, he should not go out of office with the Government, and that he should have a seat in Parliament. These suggestions we do not regard as practicable. He should, we think, enter Parliament by the ordinary method and have Cabinet rank. Without being a Cabinet Minister his opportunities would be enormously diminished, and it is obvious he could not occupy this position if he were not in political sympathy with the Government in office.

AT a meeting held at the Royal United Service Institution on Saturday, Feb. 27th, a provisional committee was formed to obtain the protection of H.M. Forces in India from contagious diseases. The following are among those who have joined this committee:—Sir James Fergusson (chairman), General Sir Havelock Allan, V.C., Sir Terrence O'Brien, K.C.M.G. (Hon. Treasurer), Admiral Sir Edmund Commerell, V.C., Brigade-Surgeon Lieutenant-Colonel Hill-Climo, M.D., R.U.I., Sir Henry Cunningham (vice-chairman), Major-General Dashwood, Surgeon-Major-General Hamilton, Sir James Hills-Johnes, V.C., Colonel F. C. Keyser, C.B. (Hon. Sec.), Dr. J. F. Payne, Lord Raglan, Mr. Shillitoe, Hon. Evelyn Ashley, and Viscount Downe.

THE meeting of the Ophthalmological Society on March 11th is to be devoted to a discussion on Retro-ocular Neuritis. Mr. Marcus Gunn will open the debate, and the medical aspects of the subject will be discussed by Dr. Buzzard. Dr. Gowers, Mr. G. A. Berry (Edinburgh), and Dr. Hill Griffith (Manchester) will also take part. We are asked to state that medical men who are not members of the society will be welcomed as visitors.

A LETTER from the Clerk of the Privy Council, Sir Lennox Peel, was read at the meeting of the Executive Committee of the General Medical Council, postponing the hearing of the appeal of the Apothecaries Hall of Ireland against the decision of the Council not to appoint assistant examiners to Monday, March 22nd, 1897, at 11 A.M.

AT a special meeting of the staff of the Medical School of Guy's Hospital a resolution was adopted expressing the hope that the Government would this session introduce a measure to appoint a Statutory Commission for the reconstruction of the University of London in accordance with the report of Lord Cowper's Commission.

A MEETING was held on Saturday last at the Museum of the Royal Botanic Society of London, at which Mr. W. Martindale, F.C.S., read a paper on the Desirability of Establishing an Institute for Teaching Botany in the Royal Botanic Gardens.

MR. H. M. CROOKSHANK, M.R.C.P. Irel., F.R.C.S. Edin. (Pasha), Director-General of Egyptian Prisons, has been selected by the English Government to succeed Mr. Hamilton Lang, C.M.G., as British Controller of the Daira Sanieh.

IT is announced, says the *Times*, that Lord Iveagh has subscribed £12,500 to the commemoration fund for providing trained Queen's nurses for the Irish poor, in addition to a like amount to the Prince of Wales's Hospital Fund.

TUBERCULOSIS IN BRIGHTON.—Speaking at the annual dinner of the Brighton Butchers' Association on Feb. 24th, Dr. Newsholme, the medical officer of health, gave some figures as to the meat condemned in the town during 1896. Owing to the coöperation of the butchers the number of animals condemned was larger than in any previous year. Yet the total was only 49 out of an estimated total of 120,000 animals killed in the town, or about 1 in 2400. Of these only 26 were condemned for tuberculosis. He expressed the opinion that hopes of Government compensation for such animals were groundless. He suggested a system of insurance against such loss, or combination to buy only animals which were completely warranted. Every butcher would thus become a sanitary inspector, and this plan he favoured of the two; it would attack the evil at its fountain head, and bring pressure upon farmers to remedy the evil condition of byres, &c., which now served to propagate these diseases.

The Lancet Special Commission
ON
THE METROPOLITAN WATER-SUPPLY.

III.[1]

THE CHELSEA WATERWORKS COMPANY.

History.

THE Chelsea Waterworks Company dates from the reign of George I. In 1722 an Act was passed for better supplying the city and liberties of Westminster and parts adjacent with water. By this Act commissioners, undertakers, and trustees were appointed for effecting the works necessary for bringing water from the Thames into canals and ponds, from which it was to be raised into convenient reservoirs between Oliver's Mount and Hyde-park. The commissioners and trustees were formed into a corporate body under the title of "The Governor and Company of Chelsea Waterworks." In 1723 George I., by letters patent under the Great Seal, appointed the commissioners and granted a charter to enable the Company to raise the necessary funds for carrying out the work. In 1726 the company was authorised to convert two ponds in St. James's-park into reservoirs and in 1727 to construct a reservoir in Hyde-park. In 1733 the authorised capital of the company was increased and the company was obliged to keep books of account. By the year 1726 considerable progress had been made in the work, and the canals made from the Thames served to supply reservoirs in St. James's-park, so that Whitehall and parts of Westminster were supplied with water in August, and the engines were of sufficient power to raise the water to the reservoir in Hyde-park. This reservoir was capable of holding 25,000 hogsheads (or 1,350,000 gallons) of water, and the one in St. James-park held almost as much, so that the company was "in a condition to serve upwards of 10,000 houses with water at a cheaper rate than the New River Company or any other company at that time." The advertisement of the company asserted that if there were no other water to serve the cities of London and Westminster and parts adjacent they would be able to supply the whole as soon as their pipes could be laid for that purpose. The severe winter of 1739–40 caused much trouble, and "a variety of unforeseen obstacles and difficulties occurred." The works were frozen up or destroyed by the severity of that dreadful winter. In 1767 the amount of water raised was 784,000 gallons, and in 1809 1,456,000 gallons daily. In 1809 an Act was obtained to enable the company to take water from the Thames near Ranelagh Creek and to lay pipes in the river bed for a distance of 240 feet, so that water might be obtained below low-water mark. At this time the water was distributed without purification; later it was allowed to subside in settling reservoirs before distribution.

The first filter bed in London was constructed in the year 1829, and was designed by Mr. James Simpson, engineer to the Chelsea Company. Mr. Simpson made a variety of experiments during the years 1825–26 and in the following year began experiments on a larger scale, being desired by the directors of the Chelsea Company to direct his whole attention to the subject. It may be interesting to describe the first filter bed that was made in London. It occupied about one acre, its sides were formed with brickwork, and it was supplied by reservoirs which had an area of about one and a half acres. The water was first pumped into the subsiding reservoirs and passed from them to the filter bed, the water being allowed to flow through small pipes without disturbing the sediment. By this means, to quote a contemporary account, "the greater part of the extraneous matter being separated by the deposition of its feculence whilst standing in the reservoirs the water rapidly percolated through the gravel and sand of which the beds are formed. ..... The filter bed before being filled with water had the appearance of several channels parallel to each other formed by banks which are broad at the bottom and gradually slope on each side to a point at the top." The sides were built of brickwork and the filtering material was formed of three different strata of gravel and sand laid over brick tunnels; the tunnels were built without mortar. Immediately over the brickwork fine gravel was laid, above this finer gravel mixed with coarse sand, and on the top fine sand. Each of these layers was 2 ft. in thickness, so that the water passed through 6 ft. of filtering material. The sand and gravel were washed before they were used. The fine sand used at the top had the advantage of removing the feculent matter which was chiefly deposited on its smooth surface, and the accumulated sediment was easily removed by scraping. It was found that the matter deposited discoloured the sand for a depth of about 3 inches, but the greater part of the matter was deposited on the surface, so that when half an inch of the upper layer of sand only was removed it renovated the efficiency of the filter. It was found that the inclemency of the seasons did not affect the action of the filter, and that when the ice was several inches thick filtration went on uninterruptedly.

About the year 1826 considerable improvements were made in a reservoir which the Company possessed in the Green-park. Mud, which had been collecting in it for several years, was removed, and the reservoir was deepened. The bottom of the reservoir was lined with hard bricks cemented together and it was surrounded by a brick wall. At this time also the machinery for regulating the sluices was altered and a very "ingenious contrivance" invented by Mr. Simpson obviated the necessity of replacing the upright pipe which formerly stood at its western extremity, and is shown in a characteristic drawing of Rowlandson, now in the print room at the British Museum. The path round the reservoir was at the time a fashionable promenade. The length of the reservoir was 220 yards, the width 35 yards, and the space occupied with all its appurtenances was about two acres. The height above Thames high-water mark was 45 ft. At this time about 25,000 tons of water were usually stored in the reservoir, although it was capable of holding a larger amount, and the engines pumped up the water every four days. The mains were 10 ft. below the surface of the water when the basin was full and served to supply houses in Westminster and Pimlico.

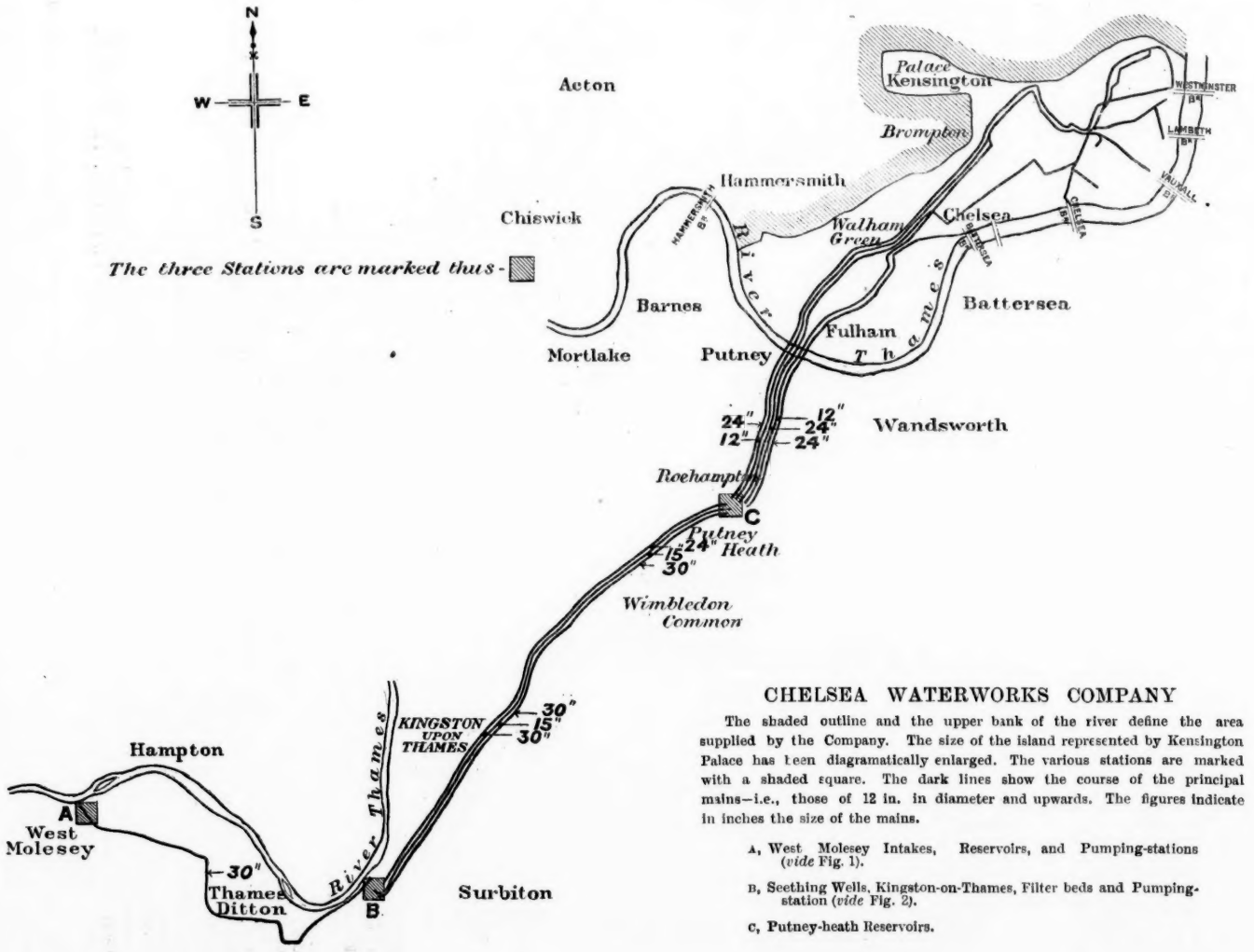
In 1852 an Act entitled "The Chelsea Waterworks Act of 1852" was passed. It authorised the Company to take water from the Thames at Seething Wells, in the parish of Kingston-on-Thames, and to construct new works in that parish, and allowed water to be taken from Chelsea Reach until the work was finished. Filter-beds were constructed at Seething Wells and mains laid down to conduct filtered water to service reservoirs on Putney Heath, from whence it was distributed by gravitation, passing across an aqueduct over the Thames at Fulham. These works were completed in 1856. In 1875 an Act was obtained to enable the Company to remove their intake from Seething Wells, which is below the junction of the Mole with the Thames, to West Molesey and to put up the necessary works there for that purpose. These were completed in the autumn of 1877.

Present State: General Description.

The Chelsea Waterworks supply Fulham, Walham-green, Chelsea, Belgravia, Pimlico, and part of Westminster. The district is bounded on the west and on the south by the Thames, and extends along the bank of the river from the Crab Tree public-house to the lower part of Northumberland-avenue; the northern boundary runs along Crown-lane and the Old Brompton-road and Knightsbridge adjoining the districts supplied by the Grand Junction and West Middlesex Companies, and on the east the district supplied by the New River Company. The intakes are at Walton, West Molesey, and Surbiton. There are subsiding reservoirs at Molesey and filter beds at Surbiton. After filtration the water is pumped to reservoirs on Putney Heath; from Putney it passes over the bridge between Putney and Fulham and is then distributed by gravitation.

The intakes.—The chief intakes are at Walton and West Molesey on the south bank of the Thames. (See Fig. 1, B and A.) The water first passes through a 1 in.-grating. The gratings are 6 ft. in width and 3 ft. in depth. Of these gratings there are fifteen, and they are placed three deep. The gratings keep out the coarser impurities—for example, leaves, small pieces of wood, &c. They are cleansed from the river side from a boat. From the intake two 36-in. pipes pass under the towing-path into the company's grounds, which adjoin the towing-path.

[1] Nos. I. and II. were published in THE LANCET of Feb. 20th and 27th, 1897, respectively.



CHELSEA WATERWORKS COMPANY

The shaded outline and the upper bank of the river define the area supplied by the Company. The size of the island represented by Kensington Palace has been diagramatically enlarged. The various stations are marked with a shaded square. The dark lines show the course of the principal mains—i.e., those of 12 in. in diameter and upwards. The figures indicate in inches the size of the mains.

A, West Molesey Intakes, Reservoirs, and Pumping-stations (*vide* Fig. 1).

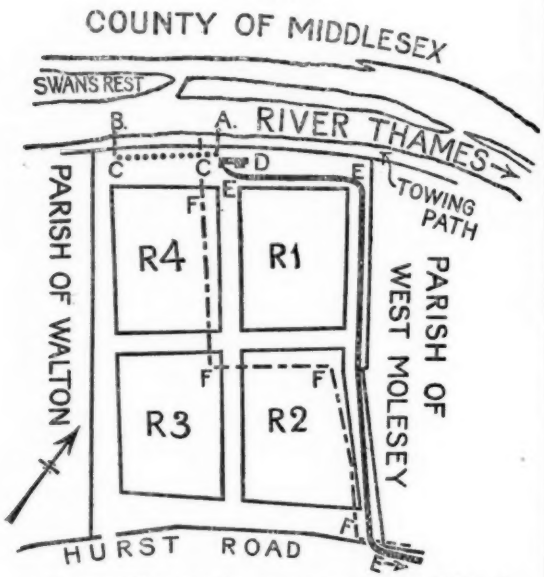
B, Seething Wells, Kingston-on-Thames, Filter beds and Pumping-station (*vide* Fig. 2).

C, Putney-heath Reservoirs.

The pipes are controlled by two regulation cocks. The water first passes into a well through five bays. The bays are 6 ft. on inside measurement and are fitted with screens. Some of the screens are of galvanised iron, the newer ones are of copper wire. The screen used is an unusually fine one containing twenty-five meshes to the square inch. The frequency with which the screens are cleansed naturally varies according to the state of the river; sometimes it is found necessary to cleanse them twice a day. When the river is in a comparatively pure state it is not thought necessary to clean them more than twice a week, or even less often. Through the screens the water passes into a brick culvert of which the dimensions are 4 ft. 10 in. by 4 ft.

The Molesey intake (Fig. 1, A) has outside screens similar to those which have already been described. The water

FIG. 1.



Walton and Molesey Station. A, The new intake (West Molesey). B, The old intake (Walton). C C, Brick culvert into which the gravel water flows. D, Engine house. E E, Main which conducts water to Seething Wells (Kingston). F F, Parish boundary. R 1, R 2, R 3, R 4, Reservoirs.

passes by two 30-in. pipes into a tank 20 ft. in depth through a number of screens 6 ft. by 4 ft. The screens are fastened on iron frames which are fixed into grooves. From the tank the water flows into the engine house.

Water from the gravel bed.—There is a brick culvert extending from the old to the new intake. (See Fig. 1, C C.) This culvert is used for obtaining a certain amount of water from the gravel. At the sides of the culvert iron valves are arranged. When these valves are raised the water can flow through the stratum of gravel into the culvert. The culvert is 75 ft. from the river and has fifteen valves in it—that is to say, there are fifteen places through which the water can pass into it from the gravel bed. The gravel beds just outside the culvert are in part artificially made; larger sized stones were placed in the immediate neighbourhood of the inlets into the culvert. It is found, practically, that little water can be obtained from this source except during the times when the Thames is at flood. When visited on Dec. 8th the river was 4ft. above its normal height and the gravel water was being used and it was understood that no water was being taken directly from the river and that the water which was going to Seething Wells was derived entirely from the subsiding reservoirs and from the gravel beds. The Thames on this day (Dec. 8th) was very turbid, but the water derived from the gravel was almost clear.

Engine house.—The engine house contains a Worthington engine of 150-horse power, which can pump 24,000,000 gallons daily into the reservoir. In the same house there are two vertical engines of 50-horse power each, which work bucket and plunger pumps. The steam is generated by six Cornish boilers and one Lancashire double flue boiler.

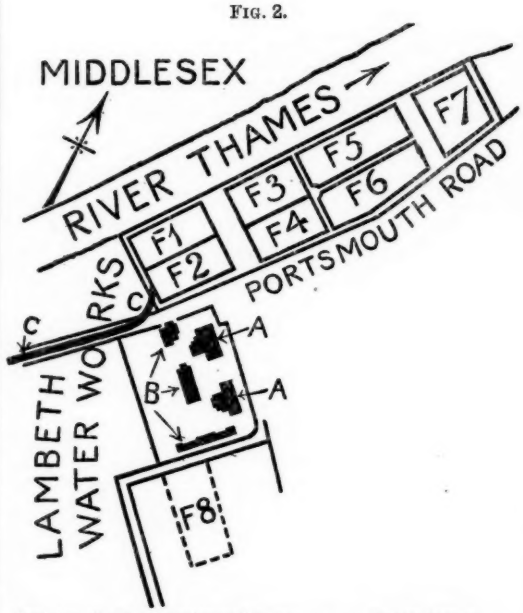
Subsiding reservoirs.—The water from the Thames is pumped into four subsiding reservoirs. These are situated between the Thames and the high road (Fig. 1, R 1, R 2, R 3, R 4). They are more or less square in form. Each has an area of about ten acres, and is capable of holding 35,000,000 gallons. The water is first pumped into one of the two reservoirs which are next the river; having remained there for some time it is allowed to flow into the second, then into the third, and finally into the fourth. It is found that the reservoir into which the water first flows contains a deposit three or four times as great as that found in the fourth reservoir. From Molesey the water flows by gravitation, or is pumped through a 36-in. pipe to Kingston.

Seething Wells, Kingston.—The Kingston station contains the filter beds and the engines which pump the water to Putney (Fig. 2).

Filter beds.—There are seven filter beds having a total area of seven acres. Each filter is capable of holding about 1,100,000 gallons of water. The rate at which water is usually filtered is 1¾ gallons per square foot per hour. The sand is washed by a hose and jet, under a pressure of 200 ft. of water.

Engine house.—The engine house contains two Simpson's double-action pumps of 150-horse power, and two bucket and plunger pumps of 150-horse power. The steam is generated by thirteen Cornish boilers. Another engine house contains four Simpson's engines of 600-horse power working bucket and plunger pumps. At one time the intake of the company was at Kingston; now all the water is usually taken at West Molesey and Walton, and having passed through the subsiding reservoirs there goes as described to Kingston. The old inlets by which the water was formerly taken from the Thames at Kingston remain, and are used in cases of

FIG. 2.



Seething Wells, Kingston-on-Thames. A A, Engine houses. B, Office, coalshed, workshop. C C, Main from West Molesey. F 1, F 2, F 3, F 4, F 5, F 6, F 7, Filter beds. F 8, Filter bed now in course of construction.

emergency. From Kingston the filtered water is pumped to covered reservoirs on Putney-heath.

Putney-heath reservoir.—The property at Putney-heath consists of eight acres situated at a height of about 177 ft. above ordnance datum. There is a stand-pipe by means of which an additional head of 22 ft. of water can be obtained. There are three reservoirs having a total capacity of 11,000,000 gallons. From Putney-heath there are three 24-in. pipes and two 12-in. pipes, which pass through Putney and over the bridge between Putney and Fulham to Chelsea

and distribute the water. The main pipes pass in the direction shown in the plan.

Area of Supply.

The Act of 1852 authorises the Chelsea Company to supply the following places:—

Supplied: Brompton; Buckingham Palace and the precincts; Close of the Collegiate Church of St. Peter, Westminster; Kensington Palace and precincts; St. James's Palace and precincts; and Scotland Yard.

Partly supplied: Chelsea; Fulham; Kensington, St. Mary Abbott; St. George, Hanover-square; St. James, Westminster; St. John the Evangelist, Westminster; St. Margaret, Westminster; St. Martin-in-the-Fields; Whitehall; and Westminster Palace and precincts.

Not supplied: Hammersmith; Liberty of the Duchy of Lancaster; St. Mary, Paddington; St. Anne, Soho; St. Clement Danes; St. George, Bloomsbury; St. Giles, Bloomsbury; St. Giles-in-the-Fields; St. John the Baptist, Savoy, Strand; St. Marylebone; St. Mary-le-Strand; St. Paul, Covent Garden; and Savoy precincts.

The following table gives the average daily supply per head and the dates of the maximum and minimum supply per head for the years 1895 and 1896. It will be seen that in both these years the maximum supplies were given during the month of July, but the minimum supply in 1895 occurred in January, and in 1896 in February.

TABLE I.—*Showing Average Daily Supply.*

Year.	Average daily supply per head.	Maximum		Minimum	
		Month.	per head.	Month	per head.
1895	43.05 gallons	July	47·96 gallons	January	38·45 gallons
1896	42·90 gallons	July	51·80 gallons	February	38·70 gallons

Length of pipes.—The length of the company's mains in December, 1896, was 245 91 miles.

Number of hydrants.—The number of hydrants erected during the year 1895 was 333; during the year 1896, 322; and the total number on Dec. 31st, 1896, was 1386.

Communication with other companies' mains.—There is a communication with the main of the Grand Junction Company, near St. George's Hospital, Hyde-park-corner.

Houses under constant supply.—The number of houses under constant supply on Dec. 31st, 1894, was 23,314; on Dec 31st, 1895, 27,104; and on Dec. 31st, 1896, 30,787.

Total number of houses supplied.—The total number of houses supplied by this company on Dec. 31st, 1894, was 36,941; on Dec. 31st, 1885, 36,941; and on Dec. 31st, 1896, 37,362.

Percentage of houses under constant supply.—On Dec. 31st, 1895, the percentage of houses under constant supply was 73·00, and on Dec. 31st, 1896, 82·00.

New Works in Progress and Projected.

Filter bed.—A new filter bed is in course of construction at Surbiton. (See Fig. 2, F 8).

New main.—A new 36-in. main is being laid from Molesey to Seething Wells, Surbiton.

OUTBREAK OF TYPHOID FEVER TRACED TO SPECIFIC POLLUTION OF A WATER-SUPPLY.

BY JOHN C. THRESH, M.D. VICT., D.SC. LOND.,
MEDICAL OFFICER OF HEALTH, ESSEX COUNTY COUNCIL.

THE following brief account of a localised outbreak of typhoid fever is of considerable interest inasmuch as the origin has been clearly traced to the use of a spring-water which had become polluted by sewage at a time when the sewage was specifically infected with the excreta of one or two persons suffering from that disease.

The outbreak occurred in the small town of Halstead, in the northern portion of the county of Essex. The town is supplied with water from a deep well in the chalk. There are a few shallow wells still in use, and on Mount-hill, on the northern outskirts of the town, there is a public drinking fountain by the roadside fed by the subsoil water collected on the hill. The surplus water from this fountain is piped to some works in the town, and supplies the cottage of a workman who resides on the premises. The only persons who use this water for domestic purposes are the inmates of this cottage, and the fountain is little used in the cold weather save by children in passing to and from school. Near the top of the hill and above the source of the spring supplying the fountain an isolation hospital has recently been erected. On Nov. 17th a baker, who is constantly driving about the country, was notified to be suffering from typhoid fever, and on the following day he was removed to the hospital. On Dec. 7th a daughter of this patient was notified and removed the same day. How the baker became infected we have been unable to ascertain. On Dec. 28th the man residing at the cottage supplied with water from the Mount-hill spring was attacked. As he had had no communication with the baker's family and had not been away from the town for over two months, a local cause was strongly suspected. The water-supply came under suspicion inasmuch as it had been observed that early in the month, after a heavy rainfall, the water was turbid. As such a condition had never before been observed it necessarily was remarked. As soon as suspicions were aroused the water was examined by the chemist at the works, and at the request of Dr. Gordon Roberts the Urban District Council caused two samples to be examined by a local chemist, one sample being taken from the fountain and the other from a small tank into which the water flows to feed the fountain. At the time these samples were taken the water had again become clear. The analyses proved satisfactory, the local chemist certifying that the analytical data "are in both cases quite satisfactory and do not afford any indication of contamination, the quantity of organic matter actually present being in each case extremely small and insignificant. Examined microscopically nothing objectionable could be detected in either. ..... I do not think any suspicion can be attached to either water." Between Jan. 22nd and 30th four children residing on Mount-hill were notified to be suffering from typhoid fever, all of whom acknowledged to drinking more or less frequently at the fountain when passing. As the water had on several occasions been observed to be turbid after rain, and no other cause save the use of the water seemed capable of explaining the dissemination of the infection, Dr. Roberts plugged up the fountain tap and wrote asking my assistance. After my visit and at my request every other probable cause, such as the milk supply, attendance at any party or school treat, &c., was investigated, but with negative results. Recognising the futility of examining the fountain water when it had become clear, I asked that a sample of the water when next observed to be turbid should be taken and sent to me; meanwhile I recommended that the pipes conveying the water to the tank and fountain should be traced and uncovered to discover the cause of the turbidity which resulted after a heavy rain. A few days after a sample of the turbid water was sent me, and the District Council ordered the pipes to be uncovered, after debating the necessity for such action for some time. The pipes conveying the water were found to cross over the roadway, passing under the sewer (leading from the isolation hospital and cottages above) and almost in contact therewith. They consisted of ordinary agricultural drain pipes, whilst the sewer was of earthenware with "plugged" joints, and four of the pipes nearest to and over the water pipes were damaged. The sewer was laid twenty years ago, but it appears probable that the pipes were only broken some six months ago, by the passing over of the steam road roller. During dry weather any leakage from the sewer might not directly enter the water pipes, but during heavy rains the escape would be considerable, and would pass straight into the land drain or water pipes, and so contaminate the water supplying the fountain and infected cottage.

The turbid water upon analysis proved to be very impure, the organic ammonia and oxygen absorbed being very much higher than in samples previously examined. Bacteriologically the water was carefully examined to detect the presence of the bacterium coli commune and the bacillus typhosus. The growth in phenolated broth was rapid and abundant. From this a phenolated plate culture was made which gave a large number of colonies, none of which liquefied gelatin, and which in appearance resembled those of the bacillus coli and typhosus. Certain of these in a gelatin culture produced gas bubbles, others did not, and these latter when grown in broth did not produce indol. Compared with the typical typhoid organism no test which we were able to

apply revealed the slightest difference, and I have no doubt in my own mind that the water actually contained the typhoid organism. As the hospital contained typhoid fever patients from the middle of November there is little doubt that the water became infected during the heavy rains of Dec. 2nd and 4th, and has been infected from time to time since.

On Feb. 6th another child was attacked with typhoid fever. Four children in this house attended the same school, but only the one attacked had drunk the fountain water, and this on several occasions when passing on his way to and from a pond upon which skating and sliding were going on during the frost.

The above outbreak exemplifies in a marked manner the danger arising from placing too great reliance upon the analysis of a water. The very fact that the character of the water in question was so markedly influenced by a heavy rainfall was sufficient to excite the gravest suspicion, and any opinion based upon a fine-weather sample was bound to be misleading.

HISTORICAL NOTES ON MEDICINE, SURGERY, AND QUACKERY.

I.

IN the diary of Nicholas Blundell of Crosby, near Liverpool, we find several medical men mentioned. On July 27th, 1702, he records that "My Father went after diner to wate of my Lord Molineux at ye New Stand, where he was sodanly taken so very ill that he sent for me to wate of him home and bring ye Coach for him. July 28th. I sent for Dr. Farington to come to my Father, but he was not to be found. July 29th. I went to Wigan and brought Doctor Frances Worthington along with me to Crosby. Aug. 1st. Coll. Edm: Butler came from Durham in his Way to Ireland, he sent to Wigan for Doctor Tho: Wor: who came late that night. I sent Tho: Howard to Whit-Church for Doctor Bostock, but he came not." Valentine Farrington, M.D., a younger brother of Wm. Farrington of Worden, Esq., resided at Preston. Dr. Thomas Worthington is mentioned in "A Cavalier's Note Book," the cavalier being Mr. Nicholas Blundell's grandfather. Dr. T. Worthington died Nov. 27th, 1702. He was practising at Wigan in conjunction with his son Francis when he was summoned to Crosby. Dr. Bostock of Whitchurch had a considerable local reputation. Doctors, however, "were in vain," for the patient died on Aug. 2nd. "About half an Hour after Tenn in ye morning being Sunday, many People in the Roome hearing Mass, and Mass just almost finished, My Dearest Father departed this life, being much lamented by all; as his life was virtuous and edifying, so was his Death. Sweet Jesus Receive his Sole." On Oct. 17th the diarist "was at ye Buriall of Doctor Tarlton's Wife." The Tarletons were an old Liverpool family, one of the streets in the town being named after them. On March 15th, 1703, Mr. Blundell receives a visit from Dr. Lathom, who "came hither to shew ye Petission wch was presented to ye Queen by Mr. Bannerd Howerd in behalf of ye Said Dr. Lathom," &c. Dr. Lathom had practised surgery in Liverpool and his wife Judith had kept a school; but the penal laws being against them as Roman Catholics they were persecuted by the town officials. In 1686 a royal mandate was issued in their favour. It was addressed: "To all the archbishops & bishops, & to their Chancellors and Commissaries, & to all other persons, exercising ecclesiastical Jurisdiction, & to the *Custos rotulorum*, Judges of Assize & gaol delivery, Justices of the peace for our County of Lancaster, & to all other officers and persons whom it may concern. James Rex, 15th March. Whereas we are informed that Richard Lathom, of Leverpoole, in our Countie of Lancaster, Chirurgeon, & Judith his wife, who keepes alsoe a boarding schoole for the education of youth, at Leverpoole aforesaid, have latelie been molested or prosecuted or threatened to be soe, for, or in respect of, their exercising the said severall vocations without license, or by reason of their religion, being Roman Catholics. Now wee being assured of the loialtie of the said Rd. Lathom & Judith his wife, & of their abilitie to exercise their respective vocations, we doe hereby authorize & license them to use & exercise the same respectively; & our pleasure is, and we doe hereby direct you, & everie of you respectively, to supersead & forbeare all prosecution against the said Rd. Lathom & Judith his wife, for or by reason of his exercising the art of chirurgerie, or his or their keepinge a boarding schoole, or socouring, teaching, or educatinge youth; & if anie sentence is or hath bene given or pronounced, or penalty recovered against, or fine sett upon him or her, for, or touching the premises, our pleasure is that the same be discharged, & that you permit and suffer ye sd Richard Lathom & Judith his wife, & each of them quietlie to exercise the said severall vocations without anie molestation or disturbance whatsoever, & for soe doing this, or the entire or inrolment thereof, wth or before you respectivelie shall bee unto you & everie of you respectivelie a Sufficient warrant. Given att our Court at Whitehall ye fifteenth day of March in the second yeare of our raigne. By his Maties. command.—SUNDERLAND." The subject of Dr. Lathom's petition above mentioned is not stated. He retired to Aintree, where he died in 1713.

Mr. Blundell, having married "Lord Langdale's Doughter" at Hathrop, carried his wife home to Crosby in a "Charriot." On July 2nd, 1703, he says: "I came from Colebrook, bated at Waringtón, was met by Dr. Lathom & treated by him in ye Road. I brought my wife to Crosby. July 8th. Sr Wm Gerard, Merchant Houghton, & Dr. Tarlton dined here." In August he was with his wife at Lathom "Spaw," which was destroyed by the sinking of coal shafts early in the present century. It was situate opposite what is now called Spaw Farm in Lathom. It was in good repute during the last two centuries. Dr. Borlase of Chester wrote two treatises in its praise and sent copies to "the Cavalier," who wrote in reply: "To these waters next under God I do certainly owe my life. 'Tis now about four or five weeks since I gave them another visit by reason of our old acquaintance. I was pretty well when I went; I drank them eleven or twelve days & returned perfectly well home. Yet I find them somewhat costly, for my stomach is so good that I eat all before me." This was in 1672. "Jany 4, 1704. I went," remarks the diarist, "to see Parson Richmond, found with him Mr. Marsden, Mr. Danvers, and Mr. Poole of Leverp: I think Parson Rich: had nuly been cut for ye stone." (Parson R. was father of Dr. Hy. Richmond.) "Jany 23rd. My wife sent for Dr. Fabius, he said she was with child." (Dr. Daniel Fabius lived at Low Hill.) "Feby 5th. I hunted about Litherland and Walton wth Leverp: Doggs in Company of Mr. Silvester Richmond & Mr. Molineux of Leverp: we had a long Chace." "Feb. 19th. I saw Ri: Jump married to Cath: Fisher." "Feb. 20th. She quarrelled with me about her not tacking Phisick & my not coming to see & pitty her." "May 2nd. Dr. Shaw & Mr. Edw. Molineux of Formby shot Rooks with Stonbows at Ince." "May 12th. I went to Ormskirk to ye Buriall of Dr. Barton." On the 27th he went to Wigan and lodged at Dr. Worthington's. "June 13th. I went to Low Hill to ye Doctors & to Leverp: I drunk wth Mr. Gleast & Dr. Tarlton; it was a wet night." At Holywell on June 25th he "went into ye Well with Severall of ye Pilgrime Sisters &c. Smiths by name in Sropshire." "July 3rd I was at Great Crosby Race between Mr. Silv. Richmond's Bay Mair and Mr. Atherton's Gray." "July 14th. I went to advise with Dr. Fabius, I dined there, thence went to Leverpoole." "July 20th. I rode to Adams Spaw to drink the waters." "Nov. 3rd. Mr. Guildus came to draw a Tooth for my wife." "April 11th, 1705. I went with my wife to Dr. Fabius." "June 22nd. I tryed an experiment wth eleven living Miss [mice?] in a hot pot." "July 10th, Uncle and Aunt Gerard &c Lodged here."

Dr. Gerard had settled as a physician in Durham and married Bridget, youngest daughter of the "Cavalier." He was of the Garswood family. "August 7th. I went to Speak [Speke] to wish Joy to Mr. Norris, I dined there, and called at Aigbourth." Dr. Norris had been married on July 12th to Anne, sole daughter and heir of Peter Gerard of Crewood, co. Chester. Dr. Norris's grand-daughter married Rich. Pennant (Lord Penrhyn). "August 14th. I gave 6*d*. in presence of ye two Mr. Witheringtons to Mrs. Aspinwall ye Midwife, for wch she is to give me six Guineys whenscever she is Married to anyone."

Silvester Richmond was evidently of a sporting turn, for the diarist records under date, May 15th, 1706, "I was at ye Great Plate at Lev: where Lord Molineux his Hors beat Mr. Sil: Richmond's Maor, I drunk a horsback with Alderman Tyarer, &c." In 1706 we find him visiting his uncle Dr. Gerard at Durham; then playing at bowls with Dr. Edward Norris of Speke, Lord Gerard, and Sir Thos. Aston. In

January, 1707, he says, "My wife went to Mrs. Bootle of the Peele to show her her finger that was burned." Mrs. Bootle appears to have been a sort of amateur lady doctor, for in July we read, "Mrs. Bootle of ye Peel came to Blood me for my fall." Probably she was an ancestress of the present Earl of Lathom. The Silvester Richmond so frequently mentioned by the diarist was probably a son of the physician of that name, who died in 1692. Further on, under date 1727, he is called "Old Sil: Richmond." Early in the present century there was another Sil. Richmond, who wrote election squibs. He was a searcher in the Customs and the "prince of Liverpool wits."

The following entries are interesting as showing the habits of medical men and squires of the last century:—"Mar. 10th, 1707. I made Coz: W. Ge: Salve alias Captain Middletons for a Bruse or Cut. April 3. Dr. Fabius came to see Tho: Gower, he let him Blood. Sept. 20th. At Leverp: I drunk with Dr. Tarlton, James Houghton, and Wm. Atherton. I payed 20*s.* at ye Exchange Coffyhous for a Periwig. October 10th. Mr. Aldred and I came from Hooton, Dr. Tarlton treated us with Wine at his own house, Mr. Plumb tryed his Lamp with two Weaks. Oct. 13th. Mr. Plumb and Dr. Tarlton came to Counce with me. Decr. 18th. Doctor Tarlton came to Great Crosby and sent to borrow my Grewhounds. Mar. 8, 1708. We called to see Parson Wairing, he was trobled with ye Stone and Gravell. April 10th. Mr. Ald: (his R. C. Chaplain) shaved my head. April 17th. I dined at Mr. Plumbs; he and Doctor Tarlton drunk with me at ye Woolpack. April 24th. I went to Leverp: and drunk at Dr. Tarlt: wth him Parson Stith and Mr. Walsh. June 19, 1708. One and twenty Adders were taken on my Midings. June 21st. I sent Mrs. Ann Rothwell with a Present of 22 Adders to ye Doctors of ye Low. [This would be Dr. Daniel Fabius of Low Hill.] June 23rd. Mrs. Bootle blodyed my Wife. I gathered some Flowers for Flowering Great Crosby Cross tomorrow. June 24th. My wife and I were at the Flowering of Great Crosby Cross. I Steeped my Feet in hot Whey for about two Hours to make my corns come out by ye Roots, but I think 'twill doe no good.' July 12th. Darby Wife brought a picture for Mr. Aldr: Alter-peece from Dr. Lathom's which he had lent me." On July 26th Mr. Blundell and other Roman Catholics had to appear before Dr. Norris and two other "Justises of ye Peace" at Ormskirk Sessions to Compound to prevent conviction on account of their religion. "Augt. 30, 1708. I began ye first time to make Milk Punch. Sept. 13. I went to Ormkirk to see Dr. Gerard. Oct. 29. I made up some Doses of Powder for ye Falling Sickness for Mary Pilkington's sister. Nov. 9th. I dined at Mr. Aldreds with Mr. Moston, Mr. Thornton, and Dr. Worthington, it being ye Doctor's birth day he gave us a bole of Punsh. Nov. 16th. I Began to make a dose of Phisick for Wm. Tompson for ye Dropsy. April 1st, 1709. I went to Leverp: and sold my Rabet skins to Leversage. Mr. Scofild, ye apothecary, gave me some Jue Jubs and Date Stones. May 1st. Duke Bluddyed my wife, Rich: Johnson, Wm Gray, I, &c., were present. May 7th. I went to Leverp: I set a great while wth Mr. Sil: Richmond at his Hous, we discoursed about Planting, sowing Cole Seed and improving Grond. May 13th I sowed one Buss: of Barley in ye Cowhey dressed with Oyle and other Ingredients as Powder of Coleseed, &c., but it did not answer expectation. May 17th. Mr. Silv. Richmond came hither, I went out with him to look at some ground to see if it was proper for Coleseed. July 11th. Ince Gardiner helped Jo: Banister to Innoculate. Augt. 7th. I went to Dr. Lathom's and asked him for a Receipt for one at York Schoole." The difficulties of travelling in those days are described in the following account of a journey to Whitchurch to consult Dr. Bostock. "August 18th, 1709. My wife & I began our Journey toward Whit-Chourch, we came too late for ye boats at Leverp: so we went over at Runkhorne, after wch we lost our way & went to Windy Weston, where we got a guide that brought us to Fradsom. Aug. 19th. We went from John Webster's, the signe of ye Bear's Paw, at Fradsom to Whit-church to Mr. Benbow's, ye signe of ye Red Lyon, where we dined and discoursed Dr. Bostock about my Wive's Paine in her back. From Whitchurch we went to Chester, where we lodged at Mr. Taylor's, ye Signe of ye Golden Lyon. August 20th. We saw several of ye Paletines in the Wool-hall, &c. We dined at Chester & thence went to ye Rockhous, but the Boat was gon, so we got a Smoke made, but no Boat coming to us we went to ye Wood-side, where Mr. Darcy Chantrell came to us and got a Boat for us, so we came home. Sept 3rd. I wated of Dr. Clayton at his Brother's. Jany. 9, 1710. Dr. Smithson came to see me and let me blood. Feb 6th. I Rosted my Steeped Wheat to make Coffy on, but it did not doe well. April 29th. I went to Leverp: & drank at Mr. Silv: Richmond's with him & Parson Foxcroft, who was formerly Curate of Sefton. June 8th. We met Mr. Blundell Coming home from Dr. Bostock. June 15th. Went to Leverp: & saw ye play acted called *Sephonisba;* or *Haniball's Overthrow*. I discoursed Dr. Smithson about his Ordering too much Lodinum for Mr. Lancaster. June 16th. I began to still some Eye-bright. June 24th. Dr. Cawood the Oculist from Dublin came to look at my Eyes; he Lodged here. June 28th. I went with Doctor Cawood to Leverpoole to assist him in geting Acquaintance & to procure a Chamber for him where his Patients may Come to him; we drank at the Post Office with Doctor Smithson, Doctor Person, &c. July 14th. I began to learne of Dr. Cawood to play at Picket. July 17th. Dr. Cawood & I went to Prescot; I went to Mr. Oliver Lime to know whether he would venture with Dr. Cawood for his Eyes; we light at the Signe of ye Ship & discoursed our Land-Lord, Tho: Moss. July 20th. I Began by Orders of Dr. Cawood to take Drops, Eye-bright Tea, and to put Clary Seeds into my Eyes. July 22nd. Dr. Caw: and I went to Leverp: we Looked at ye Dock that is in making, & we went to see ym make White-Mettle Mugs. July 24th. Dr. Caw: went to ye Flowering of Ince Cross. August 10th. I waired 24*s.* in Chinea in my Hale for my Wife. Mr. Ald: Dr. Cawo: and I went to the Grange Greene & saw a Match Boweled there between two young Men of Ince & two old Fellows of Formby, a Slave come from Turkey was on the Green. Oct. 20th. Widdow Bolton a Chirurganess Came hither to dress a cut that Fanny has got over her Eye. Nov. 30th. I Went to Chorley Town to meet young Mr. Gerard of Highfield and Pothecary Gerard's Son [I fancy that Pothecary Gerard's son was destined to be the physician who invented Everton Toffee]. Jany. 27th, 1711. I went to Leverpoole with my wife, &c. We saw ye great Saxon Maxemilian Christofer Miller. I drank at ye Wool-pack with Mr. Plumb, Mr. Allison, and Dr. Fabius & with Mr. Ford ye Puterar, Dr. Traps &c."

It is astonishing the number of medical men with whom this worthy squire dined, played at bowls, and hobnobbed. Mrs. Blundell appears to have had more faith in lady quacks. "March 12th. I cut a good deale of Eye-bright for me to smoke. March 30th. Rich: Cartwrit lett my Wife blood in ye foot. April 24th. My Wife rid behind Mr. Ald: (the priest) to Dr. Lathom's to prayers, they dined there." (Dr. Lathom, being old and infirm, had a private chapel at his house at Aintree.) On May 1st he mentions that "Cap. Sidall, Dr. Farrington, &c., played at Inn and inn" at a coffee-house. "In" signified that there was a doublet, or two dice alike out of the four; "In and in" that there were either two doublets or that all of the four dice were alike, which swept all the stake. "June 3rd. Mr. Ald: and I went to Ince to welcome home Mr. Blundell from Whitchourch." (He had been to consult Dr. Bostock and died very shortly after this visit.) "June 18th. My Wife went to Mrs. Bootles of ye Peele to shew her a Soar place she has in her Legg. Jany. 16, 1712. I went to Aintry and looked at Doctor Lathom's Housing called Aintry Hous to see in what repair it was in. Mar. 27th. Rich: Cartw: let me blood. March 30th. Being extreamly ill of a Continuall Fit of Heckoping which lasted for about 15 Hours without ever any Long intermission both Dr. Will: Lancaster and Dr. Andrews came to me. April 1st. Doctor Lanc: came to see me. I got up being on ye mending hand. May 23rd. My wife went to ye Peele to shew her foot to Mrs. Bootle which was soar with being bluddied." Mrs. Bootle's treatment must have been successful or the "soar" very slight, for a month later he records: "My wife began her journey towards Holywell; she Rid to Leverp: and designes to walk the rest." "July 7th. I was very busy most of ye afternoone shaping Tinsall, &c., for the Garland for my New Marl-pit and after Supper ye Women helped to paste some things for it. I began to teach the 8 Sword Dancers their Dance wch they are to Dance at ye Flowering of my Marl-pit. Dr. Cawood played to them." (There were grand preparations going on for some days, with plenty of music & dancing, and on the 15th July a large bull was baited in the Marlpit, the bull behaving to admiration, "not above two Doggs but what were very ill hurt.") "July 31st. I went to Mr. Ald: where I found Mr. Tho: Ford ye Puterar, Jack Whit ye Barber, Doctor Barret and Pothecary Lathom." It appears that this Thomas Ford, a Brazier, could write his name upon a wall at arm's length

with half a hundred weight hanging at his little finger. "Sept. 18th. Dr. Caw: helped me to examain my Simballing things. Sept. 21st. I called at Dr. Lathom's & Chaptered Betty Lathom about her unkindness to her Uncle & Aunt. Feby. 24th, 1713. I went to Wigan & discoursed Doctor Tho: Worthington about seting his Hous ready Furnished, it was for my Brother Langdale. June 12th. I took a Drought of Sack and Oil but found no great good by it. June 13th. I went to Leverp: with my Wife, she showed her Legg to Mrs. Maginis. June 24th. I being one of Dr. Lathom's Executors I went to his Hous to order his Buriall, he was carried on my Coach Carriage to Walton Church; there was at his Buriall Jo: Tyrer, Mr. Bower & his Wife, Mr. Crisp, &c.; there was at the Hous Mr. Shaw of Ormsk: John Crew, &c. July 8th. I met Ri: Tatlock & sold him some of Dr. Lathom's Chirurgicall Instruments. Novr. 17. I took some of ye Picturs as were Dr. Lathom's to Ned Howerd's, some of them I hung up there in ye Chappell. Jany. 5th, 1714. I removed ye Ship in ye Hall & Charg'd ye Gunns against tomorrow. Jany. 6th. Mr. Plumb, Doctor Lancaster and I, &c, was at Mrs. Anns Cocking, there were three Battles. Tatlock was here, we had a Merry-Night and Fier'd ye Gunns of my Ship. Jany. 11th. I took in hand to Cure Ginnet Blundells Legg, but she did not long continew my Pasient. Augt. 2, 1714. Tho: Kerklington ye old Simpler of Herbs, & Picture Seller lodged here. Augt. 5th. Mr. Gilb: Barrows Pothecary of Leverp: Dined here. Sept. 11th. I went to Leverp: with Mally & got a Rotton Tooth of hers pulled out by a Mountebank. Jany. 26th, 1715. I gave a Poore Woman a Doce for ye Falling Sickness. April 23rd. I shewed Dr. Only my Reel and Bottle and my Little Calf, and some other of my Curiossitiss. Augt. 14. I dined at Mosburgh wth Black Dr. Lanc: and Cap: Rob: Faz: Parson Low came to us, Oct. 19. 1715. Duke let my Wife blood in her Arme. Oct. 29th. We expected the Hors Militia to come Serch here. Oct. 31. I came not in till dark Night expecting a call. Nov. 16th. I set in a Streat place for a fat man. [The house was searched by the soldiery and Mr. Blundell was hiding; a little later he left home, made his way to London, thence to the Continent, where he and his family lived for some time.] Oct. 6th, 1717. It being near Full Moon I cut my Wive's Hair off. Dec. 9, 1718. Mr. Bower made some proposalls to me for the Purchass of Dr. Lathom's Fifteen Aiker. Dec. 13th. I went to Leverp: and drank with Mr. Rech at ye Wool-pack; he is to be Land-Lord there. Pothecarry Par gave Jolly Brown & me a Bottle of Wine at his Hous. May 14th, 1719. I went to Ormsk: and shoed my Toe to the Mountebank Dr. Fry, I drank at the Swan with Dr. Lancaster. [It would have been better had he "shoed" his toe to Dr. Lancaster and drank with the mountebank.] Nov. 14th, 1719. I dined at the Woolpack in Lev: with four Strangers, I suppose they were Londoners; I saw Matthew Buckinger, who was born without Hands or Feet, I saw him writ very well with his Stumps and tipe very dexterously some nine Pins down & play Tricks of Leger-de-Mesne; Mr. Whitley & Mr. Bayron went with me to see the Little Man play his Tricks. [The Squire himself sometimes entertained his friends with tricks of "Leger-de-Mesne."] Dec. 23, 1719. I went to ye Buriall of Wm Bawer, but came too late so that I met ye Corps & went to Sefton; when the Buriall was over I stayed drinking at the Aile-Hous with Dr. Lancaster, Selsby of Ormskerk, Young John Yates. Feb. 3rd, 1721. I Scoaped 30 Leomonds, ye Juce of them made one Pint, & about the fourth of a Pint, I put to it one pint of Brandy. I also made some shrub; the proportion was Brandy 2 Qts., Crab Vargious 1½ pt., leomonds 6, Dubble Refined Sugar 1 lb. The proportion of mixture for my last Brue of Aqua Coelestis was Brandy 2 Qts., Crab Vargeus 1 Pt. and ¼th of a Quart, Lime Juce ¼th of a Qt., Lisbon Sugar 1 lb., Leomonds 3, and being the Brandy was very good I put to it 4 Qts. and 1 pt. of Water, the water was first bouled, the outward Rine of the Leomonds was infuesed into it, so they were also in the Shrub, but the Brandy and Leomond Juce had not any Rine infuesed in it. This Night I had a Cargo of 16 Larg ones brought to Whit Hall." The worthy Squire, although he moved in the best society in Lancashire, was not above doing a little contraband business occasionally. On April 3rd, after the funeral of Widdow Maile of Maile, he "stayed drinking at ye Ail-Hous in Sefton Church Yard a good while with Doctor Lancaster, Richard More, &c." "May 10th, 1721. I sowed some Cowcomber Seeds; they had been steeped in New-Milk about twenty-four Hours." On July 8th he and Mrs. Blundell travel to Holywell and on the 9th he says: "My wife & I went into ye Well, I was much out of Order after I came out & Continewed so for some Hours." "Sept. 2nd, 1721. We called at Ormkerk & wished Joy to Dr. Lancaster & his Wife recently married. Sept. 15th. I gave Pat: Clifton [the priest] some Eye-Balsom being one of his Eyes is very bad. Oct. 12th. Being Pat: Gelib: [Father Gellibrand probably] took Phisick to-day we dined with him in his Roome. Jany. 16th, 1722. I saw young Mr. Yats & Doctor Orme set William Marrows Thigh, he broke it yesterday coming from Preston Faire. June 8th. Tho: Marrow, Junior, showed Betty Bolton his Thumb and Rob: Weedow his Foot, I had them both in Cuar. Sept. 1st, 1722. I Burned above one Groce of Pipes in ye Washhous Grate. I mixed some Pouders together for Convultion Fits." He plays bowls and drinks at Crosby with Apothecaries Lathom & Parr; dines at Wooton with Dr. Lawson of Chester, and is Visited at Crosby Hall by Mr. Blundell and Dr. Molyneux and their wives. This does not prevent him from "faulting" the two gentlemen later on for shooting near his wood. "Jany. 31. 1723 My wife went to Leverp: to show her finger to Betty Bolton Feby. 22nd. I made my Incomperable Salve for a Cut or a Bruse. March 2nd. I discoursed Mr. Peters concerning removing Will: Sumner's Doughter out of ys towne ere she be delivered. March 23rd. Mr. Sadler payed me £50 for ye Purchas of Dr. Lathom,s late Hous and Teneament. May 26th. We went over from Leaverp: in Eastom Boat and dined at Hooton with Dr. Low, thence to Chester. Augt. 26th. I went with my Doughters to Bartholomew Fair, we saw a Droll, a Little Man & a Popit Play. I met Lawyer Culcheth, Dr. Eyre and Sr. Franc: Anderton at the Castle Tavern in Drury Laine. Sept. 9th. My wife & I saw Humphrey Anger & Joseph Midleton Hanged at Tyburn. Sept. 10th. We four made a Viset to my Lady Westmoreland at Twitnam and dined there. Coming home we were overturned, Fanny's Arme & my Side was hurt, Surgeon Gihee let me blood. Sept. 16th. Mally & I saw the Corps of Mr. Fetherston carried in Forme by ye undertaiker. Oct. 29th. Pothecary Livlesley came hither & desired I would make use of him being I had made use of Mr. Latham his Master for my Apothecary. April 22, 1724. Pat Bartlett let Mally blood. Augt. 14th. Before three this morning I disturmbed two Cupple of Woosters Jane Withington, Nelly Howerd & their Sparks. August 15th. Mat: Withington came to chapter his Doughter for Courting in ye Night. Augt. 17th. Jane Withington & Nelly Howerd left their Service, they went to Darby [West Derby] Waikes. August 30th. Margarit Gray was Seased this Morning very ill after the same Manner as several of the Neighbours are, & in the Evening she took a Vomit. Novr. 2nd. Dr Angier came ye first time to see me. [Dr. Samuel Angier, an eminent physician, resided in Union-street, so called from the union of Sir Cleave Moore with Ann, daughter of Mr. Joseph Edmund.] Decr. 4th. Fanny & I went to Wigan to be under Dr. Francis Worthington, our health being very bad; the coach was overturned, & when we came neare Wigan it was laid faste ye Rode being so deep, so we left it in ye laine al Night, and we went with our Horses to Wigan where we Lodged at Kendall's, the Leggs of Man. Jany. 17th, 1725. My wife and Mally went to Leverpoole with Fanny she is to be under the care of Dr. Bromfield. She Lodges at Mrs. Williamson's. Feby. 13th. Fanny was so ill of ye Convultion Fits that Mr. Aldred gave her the Holy Oyles. Dr. Ferniho of Chester met Dr. Dickins here, they had a consult. June 6th. Fanny had one of her Violent Convultion Fits, it was occasion'd by seeing a Mous in her Roome. June 9th. I went with Dr. Bromfield and Pat: Hardesty [priest] to Crosby. I bowled four Bowles out of Hand against Mr. Cripps' three. ..... I came directly home without going into the Aile-hous. July 27th. Mrs. Bravarius came to look at my Wive's Legg. [She was housekeeper at Ince Blundell.] Sept. 25th. It being Fanny's Birth day Tatloc play'd here; we danced both before and after supper. Mr. Hen: Blundell sup'd here, we play'd with him at Chaising ye Whistle. Sept. 27th. She drank too much Burch Wine. Jany. 12th, 1726. 'Pat Bartlet Lanced Mary Molineux in her Gumbs for the Tooth-Aich, and mixed some Powder of Roman Vitriall with her Blood.' [The operator in this case was a priest.] Jany. 23rd, 1726. Mr. Livlesley sent his Brother hither with some Phisick; he fell in Rimrose as he came. Jany. 30th. Roscow went to Ince to show her lame Arme to Mrs. Prevarius [the housekeeper]. April 1st, 1726. We began to make some Wine of 60 Sivell Oringes and 30 Leomons; they cost 6s 8d.; four doz. Pound of Lisbon Sugar cost £1 4s. It made six dozen Bottles wch comes to 5s. 1½d. p Doz. May 1st. From Ormskirk I went with Fanny to Coz

Gillib of Astley, where she is to stay for some time for Change of Aire in hopes to Cure her Ague-Fits. Augt. 2. Apothecary Livsey and his Brother the Churcheon who is lately come out of France made me a Visit. Sept. 13th. Dr. Clayton, son to Daine Clayton in Ireland, and Lawyer Radcliff dined here. Pat: [Father] Curedon went hence to live at Sefton and to help at Croxtath, he has ben a Gest here, I think more one yeare. Sept. 30th, 1726. Coz: Butler and I went a Fox-hunting with Lord Molineux, there was Surgeon Livsey, Dr. Rice, &c. Oct. 28. I had seaven Lads of this Town beaton at my Gate-Hous with a Sterrop-Leather, some by their Fathers, others by their Masters and some by other Persons, for Stealing my Apples and for other Peevish tricks. Jany. 21st, 1727. I went to Leverp: and made Major Broadnax a viset; he told me that in March next he will be 108 years of Aige, he has his Memory perfectly well, and talks extreamly strongly and heartally without any seeming decay of his Spirrits. [He died in the following January and was buried at St. Nicholas's Church.] March 27, 1727. Lord Barrymore went abroad upon Business. Old Sil: Richmond and his Doughter dined at Rocksavage. April 12th. I went to Crosby Greene; there was Parson Brooks, Parson Davys, Bannion of Ormschurch, Mr. Haymar, Doctor Bromfield, &c.: there were several Cocks brought from Leverp: and Ormsch: which fought upon the Green, I saw three or four Battles. June 11th. I was at prayers at Mr. Tempest's of Broughton, Dr. Traps was there. June 8th. I put the Leaves of Whit Lillys into two Glass-Bottles, they are to make Oyl on for a Burn or Scald. March 23rd, 1728. Mr. Chisleton, Dr. Ferniough, &c., came to my lodging (Golden Talbot in Chester); I advised with him about Mally's eyes and mine and about Fanny's Laimnes. Coz: Butler and I made a Viset to Sr Hen: Bunbury, we drank there with Mr. Semor Chalmondeley, &c."

On April 4th the diary closes abruptly, though the genial squire lived nine years longer and doubtless had many drinks and games at bowls with physicians, "apothecaries," parsons, and other neighbours. He does not appear to have been the source of much profit professionally to the medical men of his acquaintance. The rest of the diary is extremely interesting and valuable as a faithful picture of the period in which the diarist lived. He had a decidedly good time of it on the whole in spite of the religious disability he laboured under.

THE PARIS CARNIVAL: NEW SANITARY REGULATIONS.

THREE years ago we pointed out some of the dangers to health which attend the Paris Carnival.[1] We then explained that the old Carnival had to a great extent died out. Formerly the butchers, wearing fancy dresses, paraded a fat bullock in the streets of Paris on Shrove Tuesday; but the weather is doubtful so early in the year, and the butchers and their bullocks did not awake any very keen interest in the minds of the Paris population. The students were better inspired when they sought to organise another Carnival in Mid-Lent on the day consecrated to the patron saint of the washerwomen. The dirty work of a laundry is perhaps scarcely more poetic than the slaughtering of cattle. However this may be, it will be readily understood that the youths of the Paris University are much more interested in the fête day of the laundresses than in that of the butchers. Thus it has come about that the Mid-Lent Carnival eclipsed in its brilliancy the more ancient Carnival held on the butchers' day. This year, however, the butchers have made a strenuous effort to come to the fore again, and instead of one street Carnival and cavalcade there are two cavalcades. Now the special feature or the new feature of these Carnivals is the Battle of Confetti. The confetti consist of small discs of paper about a quarter of an inch in diameter, with which since we last wrote on the subject the British public have, in their turn, become familiar. We explained that though this paper is extremely light yet about a million kilogrammes of confetti were thrown in the streets of Paris at the Mid-Lent Carnival of 1894, and that 3,500,000 *serpentins* of paper were likewise employed. As these ribbons of paper measure in length about 75 metres each, sufficient paper ribbon was used in the course of one single day to encircle the world six times. We pointed out that the throwing of so much paper in the streets had a tendency to clog the sewers. But what was more serious was that to avoid the expense of buying confetti many persons picked up handfuls from the ground. In thus using the ammunition twice over they naturally gathered up dust, small gravel, and dirt of every description. The throwing of confetti into people's faces was therefore attended with considerable danger. People's eyes were injured and their faces cut. But the greatest success that can be scored in encounters of this sort is to surprise someone who is imprudently shouting or speaking and to quickly discharge a handful of confetti into his or her open mouth. If the confetti are clean, no great harm is perhaps done; but if they have been scraped up from the pavement after many persons have trodden upon them, then the practice is at once dirty and dangerous. This practice also led to quarrels. Many persons naturally resented receiving showers of dirt and pebbles, so that good-humoured frolic soon degenerated into street squabbles. Since 1894 the authorities have been greatly troubled to find a practical means of dealing with these grievances. To suppress the confetti altogether would have been a very unpopular measure, so efforts were made to water the streets and render it impossible for people to pick up the confetti. But this made a horrible mess and tended to spoil the costumes of the masqueraders. Also the watering apparatus could not be brought to bear in the midst of the dense crowd where the fun was fast and furious and where it was most needed. This year, however, the authorities have hit upon an extremely ingenious device. The Prefect of Police issued orders that anyone throwing or selling confetti of mixed colours was to be arrested. Thus the bags contained confetti of only one colour. The purchaser might buy blue, red, green, or yellow confetti according to his fancy, but he could only throw one colour at a time. A similar regulation is in force in Belgium. On the other hand, the contents of the bags as they fall get mixed, and thus any confetti picked up from the pavement would be of various colours, for they would come from different bags. In this manner those who picked up old confetti, either for the purpose of throwing or of selling them again, could at once be detected and the abuse stopped. The weather proving exceptionally fine, all Paris joined in the fête. Besides, the cavalcade was really well worth seeing. To impart an aspect of historical romance the fat ox stood under a Druidical altar and was accompanied by Celtic warriors. When to this is added that there were some 11,000 masqueraders and many cars in the cavalcade, notably one consisting of a painter's palette twenty feet long on which female forms gracefully reclined and by the colours of their dresses represented the paint on the palette, it will be seen that there was attraction enough to bring together an immense crowd. This only rendered the necessity of sanitary precautions the more urgent, and it is satisfactory to know that means have at last been found to ensure that the Battle of Confetti shall be fought with clean, unsoiled confetti.

[1] See THE LANCET, March 10th, 1894. "The Sanitary Aspect of the New French Carnival."

BUBONIC PLAGUE IN INDIA.

THE total returns for Bombay up to Feb. 25th, according to a telegram through Reuter's agency, amount to 7638 cases and 6198 deaths. The week's mortality from all causes up to that date was 1650, as compared with 1728 in the previous week.

The latest official telegram on the subject of plague received by the Secretary of State from the Governor of Bombay is in continuation of that of Feb. 21st. We extract the following information from it:—"Deaths from all causes in Bombay city for the week ended Feb. 26th, 1525; reported plague deaths, 730. For the week ended Feb. 25th 102 dwellings condemned, 130 recommended for alterations, tiles removed from 1216, floors dug up in 604, and 2029 limewashed, 393 vacated, 38 destroyed by fire, and several otherwise demolished. The distinct reduction of the total number of deaths a satisfactory sign, but some of the people who left Bombay are now returning from infected places outside and have re-infected places which had become almost free. People entering Bombay as well

as leaving will have to be examined and watched, and steps to this end are being taken. The two new hospitals are opened. Similar steps will have to be taken in regard to people leaving Poona, where plague is much worse than was feared and has rapidly increased. It has so far been found impossible to get an accurate statement of deaths from plague in Poonah, but in January deaths from all causes were 497, against quinquennial average of 261. Up to Feb. 26th deaths were 862, against quinquennial average of 225. The most drastic measures will be enforced and aid of military called in. In the Thana and Surat district plague shows tendency to spread. Plague still severe in Coorla, Bandra, and Bhiwandi."

Sporadic cases of plague have been reported at some other districts and places for the week ending Feb. 26th. Quarantine camps have been established at railway stations in Sholapur district, and fairs and pilgrimages in the Bombay Presidency have been stopped where necessary.

"At Karachi plague deaths for the week ended Feb. 26th 205. Effectiveness of measures taken increasing; opposition of people diminishing. No indication of general spread of plague in Sind."

Dr. Rogers Pasha, chief of the Egyptian Sanitary Department, has returned to Cairo from Bombay, whither he had gone to study the conditions of the plague. He believes that the danger of infection to Egypt is not so great as was at first supposed, and that, seeing how slowly it travels, measures similar to those adopted during last year's cholera may be relied upon to control it. The sanitary conditions of the chief towns of Egypt are, in his opinion, worse than those of Bombay.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 6642 births and 4096 deaths were registered during the week ending Feb. 27th. The annual rate of mortality in these towns, which had declined in the three preceding weeks from 20·8 to 18·8 per 1000, rose again last week to 19·4. In London the rate was 19·0 per 1000, while it averaged 19·7 in the thirty-two provincial towns. The lowest rates in these towns were 12·8 in Huddersfield, 13·3 in Brighton, 13·5 in West Ham, and 13·6 in Halifax; the highest rates were 23·1 in Bristol, 23·2 in Oldham, 24·0 in Liverpool and in Salford, and 24·1 in Norwich. The 4096 deaths included 379 which were referred to the principal zymotic diseases, against 336 and 316 in the two preceding weeks; of these, 120 resulted from whooping-cough, 88 from diphtheria, 65 from measles, 41 from diarrhœa, 32 from scarlet fever, 32 from "fever" (principally enteric), and 1 from small-pox. No death from any of these diseases was recorded last week either in Brighton or in Halifax; in the other towns they caused the lowest death-rates in Croydon and Blackburn, and the highest rates in Salford, Bolton, Birmingham, Sunderland, and Plymouth. The greatest mortality from measles occurred in Salford, Bradford, Bolton, and Plymouth; from scarlet fever in Leicester; and from whooping-cough in Wolverhampton, Birmingham, Burnley, Sunderland, and Bristol. The mortality from "fever" showed no marked excess in any of the large towns. The 38 deaths from diphtheria included 62 in London, 4 in Birmingham, and 3 in West Ham. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three large towns. There were 43 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, Feb. 27th, against 21, 38, and 34 at the end of the three preceding weeks; 18 new cases were admitted during the week, against 12, 20, and 3 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2817, against 3050, 2901, and 2815 on the three preceding Saturdays; 237 new cases were admitted during the week, against 245, 226, and 227 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 373 and 335 in the two preceding weeks, rose again last week to 368, but were 183 below the corrected average. The causes of 67, or 1·6 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Oldham, Bradford, Newcastle-upon-Tyne, and in fourteen other smaller towns; the largest proportions of uncertified deaths were registered in West Ham, Birmingham, Liverpool, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 28·8 and 25·5 per 1000 in the two preceding weeks, further declined to 25·3 during the week ending Feb. 27th, but was 5·9 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 12·4 in Leith and 17·8 in Greenock, to 28·7 in Glasgow and 30·7 in Perth. The 756 deaths in these towns included 32 which were referred to whooping-cough, 30 to measles, 13 to diarrhœa, 5 to scarlet fever, 5 to diphtheria, and 1 to small-pox; in all, 86 deaths resulted from these principal zymotic diseases, against 105 and 119 in the two preceding weeks. These 86 deaths were equal to an annual rate of 2·9 per 1000, which exceeded by 1·1 per 1000 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had increased from 28 to 42 in the three preceding weeks, declined again to 30 last week, and included 24 in Glasgow and 5 in Edinburgh. The deaths referred to whooping-cough, which had increased in the five preceding weeks from 26 to 45, declined to 32 last week, of which 19 occurred in Glasgow, 4 in Edinburgh, 3 in Dundee, and 3 in Aberdeen. The 5 fatal cases of scarlet fever exceeded by 1 the number recorded in the preceding week, and included 4 in Glasgow. The deaths from diphtheria, which had declined from 5 to 2 in the three preceding weeks, rose again to 5 last week, of which 2 occurred in Glasgow and 2 in Dundee. The fatal case of small-pox was registered in Leith. The deaths referred to diseases of the respiratory organs in these towns, which had been 240 and 218 in the two preceding weeks, rose again to 231 last week, and exceeded by 111 the number in the corresponding week of last year. The causes of 45, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 41·2 and 43·4 per 1000 in the two preceding weeks, declined again to 37·6 during the week ending Feb. 27th. During the past eight weeks of the current quarter the death-rate in the city has averaged 40·3 per 1000, the rate during the same period being 18·8 in London and 22·5 in Edinburgh. The 252 deaths registered in Dublin during the week under notice showed a decline of 39 from the number in the preceding week, and included 55 which were referred to the principal zymotic diseases, against 58 and 72 in the two preceding weeks; of these, 34 resulted from measles, 12 from whooping-cough, 3 from diphtheria, 2 from scarlet fever, 2 from "fever," and 2 from diarrhœa. These 55 deaths were equal to an annual rate of 8·2 per 1000, the zymotic death-rate during the same period being 1·8 in London and 2·1 in Edinburgh. The fatal cases of measles, which had increased in the four preceding weeks from 7 to 43, declined again last week to 34. The deaths referred to whooping-cough, which had been 25 and 16 in the two preceding weeks, further declined to 12 last week. The 3 fatal cases of diphtheria exceeded the number registered in any week since March, 1896. The mortality from scarlet fever and from "fever" showed a decline from that recorded in the preceding week. The 252 deaths in Dublin last week included 47 of infants under one year of age, and 51 of persons aged upwards of sixty years; the deaths of infants showed a decline, while those of elderly persons slightly exceeded the number in the preceding week. Six inquest cases and 1 death from violence were registered; and 72, or more than a fourth, of the deaths occurred in public institutions. The causes of 13, or more than 5 per cent., of the deaths in the city last week were not certified.

WALTON CONVALESCENT HOME, CLEVEDON.—The annual report of the Walton Convalescent Home, Clevedon, has just been issued, and states that 318 patients were admitted during the past year. The balance-sheet shows the receipts to have been £660 and the expenditure £630.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN E. ECKERSLEY has embarked for Sierra Leone. Surgeon-Major E. D. Bringhurst-Farmar is posted for duty in the North-Eastern District. Surgeon-Major T. A. Dixon has proceeded to Strensall Camp for duty. Surgeon-Major S. C. B. Robinson has assumed Medical Charge of the Station Hospital, York, in relieving Surgeon-Major L. W. Swabey.

The under-mentioned officers retire on retired pay:—Brigade-Surgeon-Lieutenant-Colonel William H. Steele and Surgeon-Lieutenant-Colonel Edward O. Reynolds.

INDIA AND THE INDIAN MEDICAL SERVICES.

The under-mentioned officers of the Army Medical Service, on arrival from England, are posted as follows:—Surgeon-Major Stevenson to the Bombay District; Surgeon-Lieutenant Kiddle to the Poona District; and Surgeon-Lieutenant Staddon to the Bombay District. Surgeon-Major Lyons is appointed First Physician to the Jamsetjee Jejeebhoy Hospital, and Surgeon-Major J. P. Barry to act as Civil Surgeon, Belgaum. Surgeon-Captain C. T. Hudson is appointed to act as Civil Surgeon, Thana, pending further orders. Surgeon-Lieutenant Leumann to be on special duty under the orders of the Physician, St. George's Hospital, Bombay, and Surgeon-Lieutenant S. Evans to be on special duty under the orders of the Health Officer of the Port of Bombay. Surgeon-Captain Jones is appointed to act as Deputy Sanitary Commissioner, Central Registration District. Surgeon-Lieutenant W. J. Niblock and J. W. Cornwall to be on special duty at Kurrachee under the orders of the Commissioner in Sind, and Surgeon-Lieutenant W. G. Richard to be on special duty under the orders of Surgeon-Major A. W. F. Street, D.S.O. The services of the under-mentioned officers (Bengal) are placed temporarily at the disposal of the Chief Commissioner of the Central Provinces for employment on famine duty:—Surgeon-Captain W. H. Ogilivie and Surgeon-Lieutenant C. Thomson. Surgeon-Colonel W. S. M. Price, A.M.S., is brought on the Administrative Medical Staff of the Army, vice Surgeon-Colonel W. Graves, transferred to the Home Establishment.

NAVAL MEDICAL SERVICES.

The following appointments are announced: — Fleet-Surgeon William Dudley Wordsworth has been placed on the Retired List, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets. Fleet-Surgeon Michael Fitzgerald to the *St. George*. Staff Surgeon Alexander G. P. Gipps to the Medical Charge of the *Malacca* hospital ship.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant A. B. Lyon, M.B., to be Surgeon-Captain.

VOLUNTEER CORPS.

Artillery: 1st Hampshire (Southern Division, Royal Artillery): Surgeon-Lieutenant V. J. Blake, M.B., resigns his commission. *Rifle:* 3rd Volunteer Battalion the Royal Fusiliers (City of London Regiment): Surgeon-Lieutenant Arthur Anthony Howell resigns his commission and is appointed Lieutenant. 3rd (Cambridgeshire) Volunteer Battalion the Suffolk Regiment: Surgeon-Lieutenant E. H. Douty, M.B., to be Surgeon-Captain. 5th (Isle of Wight, Princess Beatrice's) Volunteer Battalion the Hampshire Regiment: Victor John Blake, M.B., to be Surgeon-Lieutenant. 1st Volunteer Battalion the South Staffordshire Regiment: Surgeon-Lieutenant W. F. M. Jackson resigns his commission, also is permitted to retain his rank and to continue to wear the uniform of the battalion on his retirement; Henry Spencer Hughes, gent., to be Surgeon-Lieutenant. 1st London: Surgeon-Captain H. F. Stokes to be Surgeon-Major. 3rd London: Surgeon-Major G. Hastings to be Surgeon-Lieutenant-Colonel. 6th Volunteer Battalion the Gordon Highlanders: Surgeon-Lieutenant George Lyon, M.B., resigns his commission and is appointed Captain.

THE HEALTH OF THE BRITISH TROOPS IN INDIA.

This subject still occupies a prominent place with all interested in the health and well-being of the Army. It is not likely, in the language of the day, "to take a back seat" until the matter has been threshed out and something has been definitely settled in regard to it. There was a large and important gathering at the Royal United Service Institution on the occasion of the reading of Major-General Dashwood's paper, and since that the subject has not been allowed to rest in the House of Commons. The sooner the results of the inquiry into the facts by the departmental committee are published the better. The main points, after all, lie in a nutshell. We have an army of young and inflammable material in India living in a state of celibacy enforced on them for the good of the State. No efforts—that is, no adequate efforts—are made to protect them against themselves or the temptations to which they are exposed, and the consequences are that the amount of venereal disease among them is infinitely greater than it is in all other armies where protective measures are taken. As far as the soldier is concerned everything has been tried in the way of occupation—physical and mental exercises and amusements, institutes, and so forth; but nothing has been done as regards the women with whom soldiers consort, with consequences which, if they continue to increase in the way they are doing, will threaten the safety of the Empire as they surely threaten already to some extent the well-being of the class of society from which our young soldiers are drawn and to which they are supposed to return. Are the opponents of all legislative restrictions on the propagation of disease willing to put their hands in their pockets and pay in taxes the enormous amount that would be required to provide a young married army, even supposing that it would be safe and practicable to do this, which it certainly would not? What, then, do they propose to do? Are they to leave matters as they are, or are they willing to leave them in the hands of those who have an intimate knowledge of India, of the hereditary castes, habits, and customs of its people, and a practical experience of the temptations to which the soldier is exposed and the social and other conditions environing him, as well as some knowledge of what can, and cannot, be done as regards the European military force in that country? It is easy to call every effort that is made to control this class of disease the licensing of vice, but we cannot shut our eyes, except wilfully, to the fact that the sexual appetite is an instinct born in a man with his birth, and that if it were not the dominating one it is the population would certainly not be what it is.

DEATHS IN THE SERVICES.

Surgeon Charles James Fyfe, R.N., on Feb. 18th, in the attack on Benin. He entered the service as surgeon in 1891, and as surgeon of the flagship *Raleigh* served in the naval brigade landed by Rear-Admiral Bedford at Bathurst, on the river Gambia, West Coast of Africa, in February, 1894, in coöperation with two companies of the 1st West India Regiment, for the punishment of Fodi Silah, a rebellious slave-raiding chief. He was mentioned in despatches and received the General Africa Medal, Gambia, 1894, with clasp. As surgeon of the *St. George*, flagship, he served in the punitive expedition against King Koko, of Nimbé, the chief town of Brass on the Niger, in February, 1895. He was also with the naval brigade landed by Rear-Admiral Rawson at Mombasa on Aug. 17th, 1895. He was mentioned in despatches. He was also present at the bombardment of the Sultan of Zanzibar's palace in August, 1896, by Rear-Admiral Rawson's squadron, and was again mentioned in despatches. The death of such a promising officer is to be deeply regretted.

Deputy Surgeon-General Joseph C. Hornsby Wright, on Feb. 26th, at Hampstead, aged sixty-six years. He took part in the Crimean war, served with the Royal Artillery, was present at the battles of Alma, Balaclava, and Inkerman, and at the siege and fall of Sebastopol, and received the medal with four clasps and the Turkish medal. Subsequently he was with the Abyssinian Expedition. He joined the Service in 1852, was promoted to surgeon-major in 1872, brigade-surgeon in 1879, and retired with the rank of honorary deputy surgeon-general in 1880

Surgeon-Lieutenant-Colonel William Andrew Durnford Fasken, at Futtehghurh, North-West Provinces, on Feb. 1st, aged forty-eight years. He joined the Indian Army in 1872, and was promoted to surgeon-lieutenant-colonel in 1892.

MILITIA MEDICAL STAFF CORPS.

The training of the Corps has been fixed as follows:—The Hampshire Company will assemble at Netley on May 1st for sixty-three days' Preliminary Drill, the Annual Training for twenty-seven days to commence on July 3rd. The Middlesex Company will assemble at Woolwich on May 3rd, the Annual Training to commence on July 5th. The Surrey Company

and the Eastern Counties Company will assemble for Preliminary Drill on May 3rd, and for Annual Training on July 5th. The Hampshire, Surrey, and Eastern Counties Companies will be placed under canvas, the Middlesex Company being quartered in huts near the Herbert Hospital.

It is announced that new Companies of the Corps will be formed on April 1st, which will furnish six vacancies for fresh commissions.

THE NAVY ESTIMATES.

The Navy Estimates for 1897–98 amount to a net total of £21,838,000, as against £21,823,000 in 1896–97. It is proposed to increase the numbers voted last year by 6300, bringing up the total strength of officers, seamen, boys, coastguard, and Royal Marines to 100,000. The expansion of the fleet has necessitated further additions to various classes of officers. Orders in Council have been obtained authorising increases in various establishments and among these the strength of medical officers has been augmented from 416 to 450. A new arrangement as regards the entry and training of naval cadets will come into force in the present year. It has been decided to gradually raise the age for entering naval cadets by one year and to shorten their course of instruction in the *Britannia* by sixteen months. In future, cadets will be entered three times a year instead of twice, by which 190 cadets will be passed through the *Britannia* yearly instead of 125 as at present.

THE LEE-METFORD BULLET.

The military officials in India have been indefatigable in their endeavours to perfect the Lee-Metford bullet, and according to the accounts received from that country their efforts have been quite successful. It will be remembered that experience in the Chitral expedition showed that the Lee-Metford bullet did not possess sufficient stopping powers. The latest experiments with the new bullet show, however, that it has these and other advantages in addition. A slight alteration at the base of the bullet saves the barrel and gives the rifle a longer life, and in practice at 500 and 1000 yards it gives better target results. Altogether the bullet, as modified and improved in India, is stated to render the Lee-Metford rifle practically about perfect as a weapon.

"WHOLESALE PLUCKING OF MEDICALS."

The *Leeds Mercury* of Feb. 27th, under the above heading, prints the following:—"Out of forty medical students who lately presented themselves for examination for commissions in the Army, only twelve passed the necessary tests for the Army Medical Staff. Evidently the medical schools lack the ability to instruct students up to the present requirements of the service." The *Leeds Mercury* has the facts right, but the deduction is entirely wrong. The plain inference is that the best students do not at present care to compete for commissions in the Service, and that this is the truth every one knows.

THE ARMY MEDICAL SERVICE.

Our Service contemporaries of last week contain articles *apropos* of Mr. Brodrick's speech in connexion with the Army Estimates and his remarks on the Army Medical Service. Mr. Brodrick has told us that the Government has already conceded, or is conceding, several important points, but one which was recommended by Lord Morley's and Lord Camperdown's committees is conspicuous by its absence—viz., the fusion of the Army Medical Staff and Medical Staff Corps into a single corps. We presume that it is the question of military titles for medical officers which bars the way.

THE NIGER EXPEDITION.

There has been some more sharp fighting in Africa, and Ilorin has been captured after a brisk engagement near the Oyon River on Feb. 15th. Major Arnold's column subsequently crossed the river and took Ilorin. Only one British officer was wounded, and the health of the force is understood to be good.

MILITARY NURSES.

A new order of military nurses to be known as the "Army Nursing Reserve," and consisting of a reserve of nurses to supplement the regular nursing service in the Army in time of war, has been approved by the Secretary of State for War.

The following officers are permitted to accept and wear the following decorations conferred by the Khedive of Egypt for services in the recent Dongola Expedition:—Surgeon-Lieutenant-Colonel A. T. Sloggett, A.M.S., the Osmanieh of the Fourth Class, and Surgeon-Captain W. H. Pinches, A.M.S., the Medjidieh of the Fourth Class.

Correspondence.

"Audi alteram partem."

THE VACCINATION PROBLEM.

To the Editors of THE LANCET.

SIRS,—In your leading article of Feb. 27th you insist with much force on the importance of making compulsory re-vaccination an essential plank in any platform that may be constructed for the purpose of influencing Parliament in regard to impending legislation on the subject of vaccination. You also express the opinion that in order to meet the exigencies of the situation "there is but one effective course open, and that is to compensate for indifferent primary vaccination by a system of re-vaccination of children before they cease attending the elementary schools." The second proposition is obviously the necessary complement of the first, for to attempt to make re-vaccination compulsory outside the limits of school age is impracticable. If it cannot be enforced during the period of attendance at school it cannot be enforced at all, except in certain special cases, such as the employés of the State, school teachers, &c. But it may not unreasonably be asked, if we are to impress upon the Legislature the importance of compulsory re-vaccination and are to urge that it shall be made a necessary incident of school life, as is the case in Germany—which we must do if our recommendation is to carry any more weight than that of a mere academic resolution—why should we not urge the identification of primary vaccination also with school life in all cases in which it has not been effectively performed before the child has reached the school doors? From a tactical point of view it will be no more difficult to carry both points than to carry one. The people who will object to the public vaccinator entering the school to vaccinate a child of five years who had not been effectively vaccinated before will object just as strongly to his doing so to re-vaccinate a child of ten. To be content with passing abstract resolutions in favour of universal compulsory re-vaccination is merely to shoot into the air whilst our opponents are levelling their guns at a very definite objective. It has been said that it is not for the medical profession to do more than to express their opinion as to what is theoretically desirable; it must be left to the legislator to give effect to such opinions. Such a course might be very good in Utopia, but we have to deal with a Legislature which will be only influenced by what can be shown to be practicable as well as advisable, and for this purpose we must be prepared to put forward some definite suggestions as to how our views can be carried into effect.

This brings me to the core of the problem with which we have to deal. The Royal Commissioners have *unanimously* reported in favour of meeting in some way the opposition of parents who refuse to have their children vaccinated and who prefer to be fined or to go to prison rather than obey the law. The dissentient minority of two found their recommendation partly upon a disbelief in the efficacy of vaccination, as compared with isolation and other sanitary precautions, and partly upon the alleged injustice, inexpediency, and impracticability of enforcing the vaccination of infants in the teeth of the objection of their parents. The majority of eleven Commissioners, whilst attaching considerable weight to the latter of these two considerations, mainly found their recommendations on *the interests of vaccination itself*, which they consider would be promoted by rescinding the present compulsory clauses of the Vaccination Acts in such a way that, whilst the present undesirable conflicts between the law and recalcitrant parents would be avoided, the withdrawal of children from vaccination through the mere indifference or negligence of their parents would be prevented. In conformity with the opinions which they express as to the value of vaccination the dissentient Commissioners recommend that compulsion in every shape should be abolished, and in so doing they are joined by two of the majority—viz., Messrs. Whitbread and Bright. The nine other Commissioners submit for consideration a scheme which, whilst suggested as a means of meeting what they designate "conscientious objections" only, would, as may be easily shown, lead to wholesale evasion of vaccination. But two of them, Sir Guyer Hunter and Mr. Jonathan Hutchinson, probably seeing that this would be the necessary result of their colleagues' proposals,

recommend a modification of the scheme which would greatly lessen the chance of so disastrous a consequence.

Now, I venture to suggest that in this chaos of conflicting opinions, complicated as it is still further by political and other considerations, the lines upon which the supporters of vaccination should proceed are these: (1) to accept loyally the recommendation of the majority of the Commissioners as to the discontinuance of the present mode of enforcing infant vaccination *on the grounds on which it is based by them*—viz., that it is in the interest of vaccination that this should be done; (2) to insist that it is not in the interests of vaccination or of the community that a concession made to wrongheadedness and ignorance, at a period of the child's life when it is difficult to avoid making it, should assume the form of a permanent withdrawal of the child during the whole of its after life from the control which the majority of the Commissioners admit that the State should exercise over all children; (3) that consequently such concession should be made simply in the form of a suspension of the enforcement of vaccination until such time as the operation can be properly and conveniently performed—that is on the commencement by the child of school-life; and (4) that as primary vaccination would thus be associated with the child's entrance into the school re-vaccination should be connected with its arrival at the age when in public elementary schools it would be about to leave.

In a paper which I read before the Society of Medical Officers of Health, to which you refer in your leading article, I endeavoured to show that this scheme is not only one which can be defended as carrying out in spirit the recommendations of the majority of the Commissioners, but that it would offer an opportunity for effecting a reconstruction of the public health service which is urgently needed. I venture to think that if this scheme, which I have elaborated with some detail in the paper referred to, were to meet with the support, not only of those organisations which represent the general opinion of the medical profession, but also that of those members of it who have given special attention to sanitary questions, it would not be difficult to obtain for it the support of boards of guardians, sanitary authorities, and other public bodies throughout the country, and thus to back it up with such a general consensus of opinion as would justify the Local Government Board in giving effect to it in any legislation which they might introduce into Parliament.—I am, Sirs, yours faithfully,

FRANCIS T. BOND, M.D. Lond.,
Gloucester. Hon. Secretary to the Jenner Society.

"THE MIDWIVES REGISTRATION BILL, 1897."

To the Editors of THE LANCET.

SIRS,—I would call attention to the very absurd financial proposals made in Clause 6 of the above Bill. It proposes that, if the income of the Midwives Board, from fees for examination and registration, be not sufficient to pay the expenses of the Board, "the deficiency shall be supplied from the respective local County funds." This proposal could only be made by persons utterly ignorant of taxation, and it converts the whole proposal into a screaming farce; as well might they propose that the expenses of the Board be defrayed out of the Poor-rate. The absurdity of the proposal will be seen if it were suggested that the Governing Bodies of the Solicitors, Chemists, Veterinary Surgeons, &c., were to be kept going by the County rates. I have called the attention of the "County Councils Association" to this great financial blunder and I am now in a position to state that the Parliamentary Committee of that Association has passed a resolution in favour of opposing Clause 6. I have also called the attention of the "Association of Municipal Corporations" to it. Neither has the eminently parochial proposal escaped the Medical Council, because at the meeting of its Executive Committee, on Feb. 22nd last, it has forwarded objections to the Lord President of the Privy Council, in which it is pointed out (*a*) that if the Bill pass, the Medical Council will have to devote part of its time to the business of the Midwives Board: (*b*) that as the funds of the Medical Council are obtained solely from practitioners, it is unfair that such money be used in connexion with the Midwives Board: (*c*) that although the Act does not refer to Ireland and Scotland (?) the money paid by practitioners in these two countries would go to defray part of the expenses of the Board: and (*d*) that the Treasury should make a grant to the Medical Council and to the Board.

I think this suggestion in the Bill that practitioners should not only hand over all their confinements to midwives, but that they should actually help to supply the funds for administering a Midwives Act, is a piece of most sublime impudence, of course the Midwives Association, and the practitioners who back these midwives up, would not dare to make such a proposal to any business men. It would be hooted out of existance. However they think that practitioners have so failed to organize their political influence and power that any gross insult can be offered to us. I have always contended that if we recognise midwives we must also recognise medical Herbalists, and bone-setters. Fortunately events support my contention. In July last (1896) the Medical Herbalists held their annual meeting at Hull, when the President said:—"The law needed to be widened, so as to admit all schools of medical thought." Who can honestly question the accuracy of this President's statement, when he has the action of practitioners connected with the obstetrical Society of London, trading in Midwifery Diplomas? I would wish all success to the Medical Herbalists Association of Great Britain, if the Midwives Bill pass! I wonder why some other medical Society—with a Status similar to that of the Obstetrical, if such can be found—does not start granting diplomas purporting to qualify the holders to practise minor medicine and surgery. Let me tell them there is money in it! From 1872 to 1894 a few practitioners connected with the London Obstetrical Society have *put into their own pockets* about £2324, through the "granting" of diplomas, while a few practitioners in Liverpool have followed suit to the tune of £1435 in 12 years. Now if a few members of "the Godlike Profession" with a high contempt for "filthy lucre," openly "make a ring" in this money-making business, why, I ask in the name of everything fair and equitable, should other poor practitioners not do likewise? A few years ago some simple-minded persons, who were *not* members of "the Christlike Profession," started the "General Council of Safe Medicine Limited" they also following the noble example of the "Christlike" practitioners granted "a few diplomas." Why not? Did we practitioners not set them the example—the noble, honest, aboveboard, and essentially gentlemanly example?

Sirs, the Medical Act 1886 enacts that if any man or woman wish to lawfully practise any part or branch of Physic, such person must (*a*) pass an entrance Examination, (*b*) study for at least (5) five years, (*c*) pass qualifying examinations, and (*d*) be registered. This Act was passed in the sole interest of the Public. Why then do a few practitioners connected with the Obstetrical Society and the Midwives Association wish to repeal this enactment? I would urge that practitioners go on coaching their M.P.'s in the real aims of the instigators of this outrageous Midwives Bill. Certain trading in diplomas has been going on; and it is hoped to make this very questionable trading lawful, by having a Midwives Bill passed. The Medical Herbalists, bonesetters, and midwives are all busily engaged in asking the M.P.'s to vote for this Bill; while constant and persistant lobbying is going on. I am glad to see that at Rochdale and Burnley practitioners have appointed Committees to oppose the Bill. May I suggest that the practitioners in every town and city in the United Kingdom at once Establish local Medico-Ethical Societies for the purpose of defeating this dangerous, degrading, and retrograde Bill. By local organisation all just aims can be accomplished by us. Co-operation with organization—two points too frequently ignored by Practitioners—must prevail. Therefore I urge the immediate formation of Medico-Ethical Societies in every town.

As showing how vigorously the supporters of the Bill are working, I supply the following from the Leicester *Mercury:*—"Mrs. Creighton.—Mrs. Creighton, the wife of the Bishop of London, will preside about the middle of next month over a meeting to be held at London House in support of the Midwives Registration Bill. The promoters of the measure are receiving many assurances of sympathy from all parts of the country." Now, will each practitioner, his wife, and her friends at once ask the wife of their clergyman to write to Mrs. Creighton and ask her to grasp the fact that the existing agencies by which poorer women can be helped in their confinements are more than sufficient, as will be seen on

referring to my address on "How are Midwives to be done without," in THE LANCET of Jan. 16th, 1897.

I am, yours etc.,

Liverpool, Feb. 28th, 1897. ROBERT R. RENTOUL.

To the Editors of THE LANCET.

SIRS,—Your correspondent Mr. Watt asks that every confinement may be directly supervised by a medical man. The idea, all must admit, is excellent and much to be desired, but how is it to be carried out? He says, clubs, dispensaries, and the poor-law; but he does not take into account medical men. A large number—I think I may say the greater number—of medical men in established practice would not care to undertake four or five times as much midwifery as they already do: many would not have the time, some would not have the physical endurance necessary, and others from various reasons would feel they were not capable of doing this extra work; and then many—I think very many—would not only be disinclined, but would absolutely refuse, to undertake a large number of midwifery cases. In proof of this assertion I would point to the advertisements of practices for sale. How often we see stated as a special attraction "Very little midwifery," "Hardly any nightwork," or some such expression. We certainly do not want any addition to our ranks to enable us to cope with this new imposition, as we are already far too crowded.

Clubs and dispensaries are well as far as they go, and they might go further with the help of midwives in a manner I have suggested before,[1] without any injury to the public or the profession. Poor-law fees at present are quite inadequate; that, of course, might be remedied, but the machinery is very cumbersome, and, in spite of Mr. Watt's assertion, that "no stigma of pauperism ..... or other social ban attaches to such medical relief," I feel sure he will find many to differ from him who live and practise among the working classes, at any rate in rural districts; the poor do not want to be paupers, neither is it good political economy to encourage them to be. Although the law may allow the guardians to pay anyone for attendance at a confinement, they would, I take it, in actual practice only pay medical men who were not Poor-law officers in cases of emergency. All medical men, I presume, are agreed that the present state of things is too bad to be allowed to continue. The opponents of registration are convinced that there would be danger from want of control and supervision of the proposed midwives, and the promoters of registration are equally certain that medical men cannot possibly do all the work themselves. If only the holders of these two latter opinions could see and admit that there was some truth in their opponents' views the ground would be considerably cleared for useful work and there would be some chance of coming to a definite and useful decision.—I am, SIRS, your obedient servant,

Freshford, March 1st, 1897. CHAS. E. S. FLEMMING.

"SHOULD EPILEPTICS MARRY?"

To the Editors of THE LANCET.

SIRS,—The statements made by Mr. William G. Thistle in THE LANCET of Feb. 27th require immediate and unqualified contradiction. Dr. Gowers is absolutely correct in stating that there is no reason to believe that accidental lesions are transmitted from parents to offspring. Mr. Thistle states that "instances abound in the writings of Darwin, the late Professor Rolleston, and others." Nothing could be further from the truth. Neither of the writers named was able to cite a single well-established instance of such transmission, nor did they profess to do so, except in regard to Brown-Séquard's guinea-pigs, concerning which recent experiment and inquiry have raised considerable doubt. In view of the fact that Mr. Thistle is so completely mistaken as to what is known and accepted on this subject, I am myself unable to attach any value at present to the cases A B, C D, E F, G H, which he states came under his own observation. Mr. Thistle apparently is not aware that a great deal more evidence is required than the mere statements of patients in order to establish such facts as those which he believes in with reference to the transmission of the effects of lesions. If he can satisfactorily establish by a full history and independent testimony any one of the cases cited by him, he will have made a really valuable contribution to science. Hitherto all such supposed cases (to the number of hundreds) have broken down when carefully inquired into.

I am, Sirs, yours faithfully,

Oxford, Feb. 28th, 1897. E. RAY LANKESTER.

To the Editors of THE LANCET.

SIRS,—The cases cited by Mr. Thistle in favour of the hereditary transmissibility of acquisitions are not convincing. Of the four which he gives from his own experience three pertain to the eye, and one of these (Case 3) is useless for purposes of argument. Can we eliminate from the other two the element of coincidence, seeing how numerous are the cases on record in which a parent has lost his sight through accident without any visual defect being transmitted in consequence? Is it not an accepted fact in institutions for the blind that those who have lost their vision through accident, such as small-pox, purulent ophthalmia, and injury, may marry without fear of the defect being transmitted? Apart from the possibility of Mr. Thistle's first two cases being coincidences, is it not also possible that in each of these cases the accident which destroyed the sight of one eye was predisposed to by defective vision in that eye, the defect in the corresponding eye in the offspring being inherited in the usual way? I mention this in order to show how easily error may creep into observations of this kind. Case 4 affords, perhaps, an even better illustration of this. It is highly probable that the deformity of the little finger to which Mr. Thistle refers as having been transmitted from the father to his children is an instance of a well-known deformity which tends to run in families, and that it was not acquired by the father. Deformities of this kind are generally attributed to accident. I am here reminded of a remarkable case which quite recently came under my observation. A medical student damaged his left little finger in football, with the result that it became bent and stiff. Shortly afterwards his father returned from India, and the son noticed exactly the same deformity in his left little finger, and was surprised to hear that it also had been produced by a recent accident. Now, had this accident befallen the father before the son was got, the case would have been cited as an unmistakeable proof of the inheritability of acquisitions.—I am, Sirs, yours faithfully,

Devonshire-street, W., March 1st, 1897. HARRY CAMPBELL.

"A QUESTION FOR ANÆSTHETISTS."

To the Editors of THE LANCET.

SIRS,—The importance of the questions raised by Mr. Clement Lucas in a communication to THE LANCET of Feb. 20th must be recognised by all, both surgeons and anæsthetists alike; but, I think, after a little examination the charges brought against the safety of ether inhalation will be shown to have no substantial basis in fact.

Firstly, as to whether the administration of ether ever causes inflammation of the lungs. During an experience of ten years as an anæsthetist Dr. Hewitt[1] only found two cases in which bronchial irritation followed the use of ether, and only one case, that of an exhausted patient with ovarian tumour, out of twenty-seven reported fatalities for the years 1880–89 inclusive was due to pulmonary congestion. Ether produces an increase of mucous secretion from the respiratory tract; but beyond this in thousands of cases there is neither cough, dyspnœa, nor other symptom of irritation after its inhalation. Now if ether caused lung inflammation at all it surely would be that form we designate catarrhal pneumonia, not due to the pneumococcus, but only secondary to bronchial irritation. Mr. Lucas, however, makes the astonishing suggestion as a second charge that his patient may have been infected with pneumococci by means of the ether inhaler. This is not even a scientific probability, for bacilli do not fly about in a moist atmosphere, but remain adherent to the surfaces upon which they were deposited, and, again, pneumococci are found in the epithelium of the healthy mouth[2] and are therefore present in the respiratory tract in many cases before the ether inhaler is applied. Every inhaling bag, mask, and facepiece should be thoroughly washed, or scalded out if possible, between each case, but with this precaution the addition of the inhaler

[1] THE LANCET, May 2nd, 1896, p. 1249.

[1] Hewitt: Anæsthetics and their Administration, p. 170.
[2] Baumgarten: Thesis ii., p. 244.

subjects the patient to no more risk of lung infection than a ride from Gower-street Station to Portland-road Station on the Metropolitan Railway.—I am, Sirs, yours faithfully,

H. BELLAMY GARDNER,
Assistant Anæsthetist to Charing-cross Hospital.

Welbeck-street, Cavendish-square, W., March 2nd, 1897.

To the Editors of THE LANCET.

SIRS,—Probably other anæsthetists will reply to Mr. Clement Lucas's article "A Question for Anæsthetists," yet I should like to say a word or two on the subject. If the cases of pneumonia after operation which he mentions were due to septic infection from the inhaler, surely the condition of the inhalers must have been filthy in the extreme. At the Middlesex Hospital the interior of the ether bags and face-pieces are carefully cleansed with an antiseptic solution every day after use; but even before that precaution was adopted I never heard of cases such as Mr. Clement Lucas describes, and if they had occurred frequently I imagine that one would not have been left in ignorance on the point. As to the remark about the anæsthetist distending the ether bag with his own breath, I can only say from a pretty large experience in ether administration that in no case whatever can such an objectionable proceeding be necessary.

I am, Sirs, yours faithfully,

THEODORE G. A. BURNS,
Anæsthetist to the Middlesex Hospital.

Welbeck-street, W., Feb. 24th, 1897.

To the Editors of THE LANCET.

SIRS,—We would point out, in answer to the question asked by Mr. Clement Lucas in THE LANCET of Feb. 20th, that it is quite possible to render aseptic all the apparatus for giving ether or gas and ether supplied by us, and that without any difficulty. At the suggestion of Dr. Dudley Buxton we made the rubber portions easily removeable, so that an antiseptic solution can be run into and through them and any like treatment can be applied short of boiling or baking, which, of course, is impossible in the case of rubber. Were there any large demand for such a thing a bag could be devised which could be replaced for every operation, daily or weekly, at a very small cost. We would also point out that it is not necessary for the bag to be inflated by the administrator's breath. If the cone end of our bag is held five or six inches from the mouth a slight blow will fill it, and that not by the administrator's breath, but by the surrounding air. The latest form of chloroform inhaler designed by Dr. Dudley Buxton is made so that the face-piece and all except the rubber parts may be boiled.

We are, Sirs, yours faithfully,

MAYER & MELTZER.

Great Portland-street, W., Feb. 25th, 1897.

"CORONER AND MEDICAL MAN."

To the Editors of THE LANCET.

SIRS,—In your annotation on "Coroner and Medical Man" in THE LANCET of Feb. 27th you lay down very clearly certain points, and I am fully willing to admit my technical error. Nevertheless, I should like to point out that *before I was sworn* I stated that I had had no order to make a post-mortem examination and that from the nature of the case the inquest could not possibly be concluded without the evidence arising from one. Nevertheless, in the face of this the coroner announced his intention not to give such an order. To quote your article, "The coroner, acting within his discretion, thought a post-mortem examination was not called for, and declined to make an order." To think that a post-mortem examination was not called for in the face of my positive statement that no conclusion could be arrived at without was absurd. You do not allude in any way to the other side of the case—namely, what would have happened if I had found some natural cause for death, and so rendered an inquest unnecessary. This was, of course, my reason for making the post-mortem examination, and on my making the remark to the coroner: "If I had found a natural cause of death and so saved the bother and expense of an inquest, you would certainly not have stated that my action was illegal." With this he fully acquiesced. One more question, if I may occupy your space. Is it legal for a coroner to give an order for burial with a certificate of the cause of death without holding an inquest?

I am, Sirs, yours faithfully,

Feb. 27th, 1897. SIDNEY H. SNELL, M.D., B.S. Lond.

THE ETIOLOGY OF BERI-BERI.

To the Editors of THE LANCET.

SIRS,—There has recently been an epidemic of beri-beri at the Richmond Asylum, Dublin. As I take much interest in this disease—almost one-third of all patients I see are suffering from it—and in view of tin poisoning being a possible cause, I should be glad if I could find out through the medium of THE LANCET if there is any possibility of tin-poisoning occurring at the Richmond Asylum. One of the questions which has suggested itself to me is whether the water of the place is conducted through tin-lined pipes. It is probably an acid water, as are many of the waters of this country. I shall be much obliged for an answer to this question, and offer my thanks in anticipation.

I have the honour to be, Sirs, yours faithfully,

J. TERTIUS CLARKE,
Acting Resident Surgeon, Negri Sembilan,
Straits Settlements.

Jan. 28th, 1897.

THE DUBLIN SLAUGHTER-HOUSES.

To the Editors of THE LANCET.

SIRS,—I beg to ask you to allow me to correct an error into which I was led as to the number of slaughter-houses in Dublin. The mistake arose from the numbers having been allowed to remain on the buildings in the order in which licences were granted during the past 100 years. Thus, although these numbers run up to 359 at least, only 66 actually exist at present, in addition to the public abattoir. It is therefore a satisfaction to find that the number actually in use at present has fallen from 87 in 1879 to 66 as seen in the registered list, which has been kindly shown to me by Sir C. Cameron, the chief medical officer of health, and to learn that measures are being taken to extinguish three others. An attempt to abolish others failed under the Public Health Act. It is to be hoped that these measures will be continued, although their abolition is attended with expenses.—I am, Sirs, yours faithfully,

Dublin, March 2nd, 1897. CHAS. F. MOORE.

"ALBUMINURIA IN PREGNANCY."

To the Editors of THE LANCET.

SIRS,—I see, to my great regret, that my article on Albuminuria in Pregnancy is published to-day without my revision. The manuscript was written in haste for reading at the Hackney Branch of the British Medical Association on Oct. 5th, 1896, and, as my revised slips will show, stood in need of much amendment. You will remember that when you accepted the paper it was on the understanding that I should be at liberty to alter it freely in slip. The fault, I admit, is mine, as I received the slips at the beginning of the week, but with no intimation that the article would be published that week. Was not the time allowed rather short? In fact I was too much pressed by other work to be able to return it sooner than I did. I hope that you will kindly publish this letter in explanation of a misfortune which has led to the appearance of my article in what I consider—and I fear my friends likewise will consider—to be a very rough and inaccurate state. The corrected slips would reach you on the day of publication.

I am, Sirs, yours truly,

T. CLIFFORD ALLBUTT.

St. Radegund's, Cambridge, Feb. 26th, 1897.

P.S.—In the first paragraph I appear to point to a particular author as a supporter of the mechanical causation. By my revised slips you will observe that such an attribution was not intended.

"AN UNUSUAL RESULT OF ABORTION."

To the Editors of THE LANCET.

SIRS,—In reply to Dr. C. E. Purslow's request for instances of similar experiences made at the end of the account published under the above heading in THE LANCET of

Feb. 13th of a case of abortion where the "fœtus contained in its amniotic sac had been expelled" apart from the placenta and the remainder of the membranes, I wish to say that twice in the past seven months I have met with two specimens of a like nature. The first of these I regret to say is not to be had. Through the bursting of the amniotic sac and consequently the loss of the liquor, it was not preserved. The other happily is in existence, and is in the possession of Mr. E. Webster of this place, to whom I presented it. The particulars I met with are, practically speaking, the same as are given by Dr. Purslow. In each instance the fœtus, plainly visible even to the distinguishing of the sex, was enclosed in the intact amniotic sac, the latter being completely free from the presence of any chorionic or placental tissue, which came away separately. In fact the amniotic sac with the fœtus within resembled somewhat the appearance of an egg with the shell off. I should mention, perhaps, that in neither case did I know anything of the pregnancy until I was summoned in attendance, and with regard to the specimen I saved, it was found in and removed from the vagina. Roughly estimating, it was about the size of a goose's egg, and, as far as I could judge, the result of conception of from three and a half to four and a half months' standing. The only difference between Dr. Purslow's description and what I found is in reference to the umbilical cord. This was in my case connected to, and by its weight it caused a dimple to be present on the outer surface of, the sac. No discharge whatever took place previous to the sudden onset of these abortions. I can remember nothing different worthy of notice in connexion with the lost specimen, except that in comparison with the preserved one it was smaller in volume and was found lying in the bed on my arrival.

I am, Sirs, yours faithfully,

R. HILL SHAW, M.B., B.Ch. Dubl.

Brighton, Feb. 18th, 1897.

THE ESSAYS AND ADDRESSES OF THE LATE SIR J. RUSSELL REYNOLDS.

To the Editors of THE LANCET.

SIRS,—We all feel grateful to Lady Reynolds for the publication of these essays, though we have to forego the author's revision. Wanting this, I have to correct the passage in a speech at the University College dinner which refers to the first use of ether at the hospital, where, from a slip of the tongue or of the pen, the name of Mr. Peter Squire is given in place of mine. An old friend writes on Feb. 26th last:—"I perfectly well remember the story of the first anæsthetics from Dr. Reynolds himself, and that he said it was Dr. Squire who administered it." My own recollections of this period were given in the *British Medical Journal* of Oct. 16th, 1896.—I am, Sirs, yours faithfully,

WILLIAM SQUIRE, M.D. St. And., F.R.C.P. Lond.

Ealing, W., March 2nd, 1897.

"ELECTIONS OF MEDICAL OFFICERS OF HEALTH: A PROTEST."

To the Editors of THE LANCET.

SIRS,—In replying to your correspondent, "County Borough M.O.H.," perhaps you will kindly give this an equal prominence to your correspondent's letter. I wish to say that it appears he has yet to learn that abuse is no argument. As to my letter being ill-conditioned, I will leave that matter to others who, judging from his comments, will be more capable of forming a just opinion. I have no doubt in the case of your correspondent it is a question of "a fellow feeling making one wondrous kind." I should have left his communication "severely alone" had there not been some glaring inaccuracies and general misrepresentation in it. If he had given my letter any consideration except to pick holes in it he would have perceived that the point raised was not as to the relative merits of the individual candidate. I may, however, for your correspondent's information say that I have had many years' experience as medical officer of health of an urban sanitary district and was qualified twenty years ago, and that, I dare venture to say, was before he acquired his greatly prized D.P.H. According to your correspondent, anyone who has not the D.P.H. is not to be considered as eligible for a public health appointment. Why not turn out those now in office in large and small districts who have not that diploma? This is the logical sequence of "County Borough M.O.H.'s" argument.

Another argument used by your correspondent shows that he is a special pleader, and is specious but not convincing—viz., that the medical officer of health, in giving up part of his district to the assistant, thereby pays his assistant out of his own pocket. If a man is unable to attend his practice or if anyone cannot do his work through illness or from some other cause, and another man does the work and gets the pay, I fail to see how it comes out of the sick man's pocket. My object in writing to you, whatever your correspondent or others may say, was simply to expose what I considered then and now as an injustice, and I may now say that the members of the Council informed me when the usual process of quizzing was gone through that they did not wish, or, as they expressed it, "the feeling of the Council was against, any man coming into the district to practise." In my application I offered to reside in or near the district. Here what is for the advantage of the district (if a medical officer of health is of any use at all) is considered a barrier. Perhaps your correspondent will say that it is no advantage having the medical officer of health near a wide rural district instead of forty miles off. The fact is, the whole thing when looked at without prejudice may be summed up simply as a farce; and, *pour encourager les autres*, ought to be made known.

Notwithstanding your correspondent's sophistry I retain the *nom de plume*, and beg to remain,

Sirs, yours truly,

March 1st, 1897. JUSTITIA.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Birmingham and the Epidemic of Diphtheria.

THE meeting of Birmingham medical men which was convened at the request of the health committee of the Town Council and held at the Medical Institute on Feb. 25th to discuss the treatment of diphtheria brought out some interesting expressions of opinion. The value of the antitoxin treatment, if taken in hand early and the serum used in sufficient quantities, was strongly insisted upon, Dr. Hill, the medical officer of health, bringing forward the very favourable results obtained from the treatment in post-scarlatinal cases which had occurred in the Scarlet Fever Hospital. Dr. Saundby, President of the Medical Institute, said that it was essential, in the first place, that all cases of diphtheria should be promptly notified, but that, as the absolute diagnosis of diphtheria was impossible in the absence of a bacteriological examination, it was essential also, with a view to obtaining correct statistics, that facilities should be given for a bacteriological diagnosis in each case. He therefore suggested that the proper tubes for obtaining specimens of the morbid secretion should be supplied by the health committee to the medical practitioners making the returns. It was essential that antitoxin should be of good quality and that it should be obtained readily. The serum was an expensive article, and medical practitioners attending the poor could not be expected to supply it at their own cost, while their patients were unable to provide it. He therefore suggested that it would be necessary to supply antitoxin gratis. He also thought that the health committee should arrange for special hospital accommodation for diphtheria, as they had already done for small-pox and scarlet fever. Mr. Alderman Cook, chairman of the health committee, said he understood that the medical profession desired three things—(1) a special diphtheria hospital; (2) an establishment for bacteriological examinations; and (3) an arrangement for the gratis supply of serum. He promised to bring these views before the health committee.

Inquest on a Coroner.

Very rarely does it become necessary to record the death of a medical coroner under circumstances demanding an inquiry of the kind conducted so frequently by himself in his own court. An exceptional instance in the death of Mr. D. R. Wynter, coroner for Central Warwickshire, demands a notice. On Feb. 24th Mr. Wynter, not feeling well, remained in bed; he subsequently sent his housekeeper to a druggist with a prescription for an ounce of prussic acid.

Shortly afterwards he was found dead with the bottle half empty by his side. Worries and anxieties of a financial kind were shown to have preyed much upon his mind of late and no doubt disturbed his mental balance. Mr. Wynter had been a Member of the Royal College of Surgeons of England since 1861 and practised at Kenilworth. His manner was always kindly and genial, his public duties were conducted in an exemplary manner, and his friendship was held in esteem by all who knew him. He was unmarried.

March 3rd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Manchester and Salford Sanitary Association.

THE annual meeting of the Manchester and Salford Sanitary Association was held on the 19th ult., Dr. Leech presiding, in the absence of the Lord Mayor. The report showed the existence of serious overcrowding in Manchester, and also that a large proportion of the present dwellings were unfit for human habitation and could not be made so by structural alterations. Some attention was, therefore, given to the question of coöperating with the City Council in their efforts to supply improved dwellings. A good deal of prejudice, fairly to be called ignorant, has existed against the block of workmen's dwellings in Oldham-road, and in consequence of "an outcry" having been raised a deputation visited them and reported "that the arrangements for health and comfort seemed quite satisfactory and that the tenants of the dwellings were invariably satisfied." Opportunities at the various lectures given under the auspices of the association were taken advantage of to combat the prejudices against the so-called "barracks." But more practical coöperation was thought to be needed, and arrangements have been made by the association for a conference on the subject, "which it was hoped might lead to the initiation of some plan for supplementing, by means of private enterprise or otherwise, the provision of dwellings made by the Corporation." The committee were indebted to their colleague Mr. William Thomson for a series of reports on the débris of exploded lamps received from the police through the courtesy of the Chief Constable, and in consequence of the evidence thus obtained they were induced to press upon the Government "the importance of raising the present low flash-point of the mineral oils imported to this country." A conference is also to be held at an early date to discuss the sewage question, which is an important one for Manchester just now. An important event in the past year was the publication of the report of the committee for testing smoke preventing appliances—an offshoot of one of the branches of the association. This report—not a hasty one, for it had taken six years to prepare and embodied an enormous amount of close and accurate work—"demonstrated that the smoke produced by steam-boiler furnaces and in some manufacturing processes might be prevented." The committee therefore had joined other kindred associations in preparing a memorial to the Local Government Board in favour of Government inspection and control of the nuisance. The committee also memorialised the Home Secretary on the subject of carbolic acid poisoning. The association does good work for the community, and might do more to an almost indefinite extent if it were not crippled by want of funds. Manchester is not often charged with want of public spirit, but it is not to its credit that so little is shown towards this association that the income has "dropped to the low sum of £144, which was inadequate to pay ordinary standing expenses." In contemplation of the approaching conferences, &c., an appeal is made for special donations and subscriptions. In moving the adoption of the report Dr. Leech stated that at the present death-rate Manchester and Salford paid a death-toll of 4400 lives more than if the health conditions of Manchester and Salford were equal to the average of those which prevailed generally in England. He spoke of the educational work of the association by lectures and tracts, the special and practical teaching in hygienic matters by the Ladies' Health Society and of the influence it was enabled to bring on various authorities. As regards infectious disease, "of late an advance had been made which placed Manchester in front of almost all, if not of all, other towns." The medical officer of health, Dr. Niven, and Professor Delépine have arranged that in cases of suspected infectious disease "materials were sent to the bacteriological laboratory which enabled a diagnosis to be made at once." The result was communicated to the medical officer of health, and a saving of two or three days often effected in what might be a very serious case. As Professor Delépine said, but for the facilities offered by Owens College it would be necessary for the Corporation to equip and maintain on their own account a bacteriological laboratory.

St. Mary's Hospital: End of the Stanley Grove Scheme.

The annual meeting of the subscribers to the St. Mary's Hospital was held on the 22nd ult., Mr. Duncan Matheson presiding. The most important part of the report related to the negotiations with the Lewis Trustees to establish an amalgamation with the Manchester Southern Hospital, which the trustees made a primary condition for the grant of £70,000. These negotiations have lasted three years, and the Board thinks they have in many respects been needlessly prolonged. "The whole may be briefly summarised as an offer to bestow the gift only on the condition of a transfer of the whole assets of the hospital, which now exceed £100,000, and that the joint hospital should be built in Satnley-grove on land belonging to the Owens College." The Board states that the conditions of the Lewis Trust "involve the abolition of St. Mary's Hospital and the absorption of the whole of its acquired property for the endowment and maintenance of a hospital under the control of the Owens College." It declines to remove the hospital to a site "beyond the sphere of its operations, not only in Salford, but in Hulme, Ancoats, Oldham-road, and many other like districts of congested population, whence the majority of the patients at St. Mary's are supplied." The statement of the financial position shows that in 1895 the total income was £3171 14*s.* 3*d.* and the expenditure was £3899 16*s.* 5*d.*, or a deficiency of £728 2*s.* 2*d.* In 1896 the income was £3245 14*s.* 6*d.* and the expenditure £3901 16*s.* 11*d.*, showing a deficiency of £656 2*s.* 5*d.* The annual deficit thus approaches £700, "which is occasionally relieved by bequests received of less than £500." which, under the by-laws, may be so appropriated. Whatever opinion may be held as to the wisdom of declining to enter into the proposed scheme, there is no doubt as to the desire of the Board to come to a right decision.

The Children's Hospital, Pendlebury.

The sixty-eighth annual meeting of governors was held on the 24th ult., when the need for wider financial support was strongly urged by the Dean of Manchester, who presided.

The Manchester Consumption Hospital.

The annual meeting of supporters of this charity was held the week before last, and as a pleasant contrast to the despondent tone of too many such documents the report showed a sound financial position. This state of affairs warranted the Board in declaring their intentions to bring about some excellent developments in future.

March 2nd.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Report of the Police Establishment on the State of Crime in Newcastle-upon-Tyne during the year 1896.

CAPTAIN NICHOLLS, the chief constable of Newcastle-upon-Tyne, has just issued his twenty-eighth annual report showing the amount of crime dealt with during the year 1896. The report shows an increase of drunkenness, particularly among women, accounted for in the opinion of the police by the improved condition of trade. The increase of 15 per cent. in the cases of drunkenness among women accounts to some extent for the large number of children brought before the magistrates on account of their being neglected or ill-treated by their parents. One hundred and nine parents were proceeded against by the police for the ill treatment or neglect of their children; 167, as against 92, children under sixteen years of age, a large majority of whom were considerably under sixteen years of age, were arrested for stealing. Forty-seven children were committed to reformatories, industrial schools, or to the workhouse. Attention, too, is drawn to the very large number of young persons proceeded against for misconduct in the streets, such as gambling and the

minor offences of stone-throwing and football. A graceful compliment is paid to Dr. W. D. Arnison and Dr. Beattie for the way in which ambulance instruction has been given by them to the city police. The general health of the police has been good. The report shows a wonderful immunity from serious crime, notwithstanding the increase of drunkenness.

Dr. Arnison.

The rule at the Royal Infirmary at Newcastle-upon-Tyne under which members of the honorary staff have to resign upon reaching the age of sixty years now applies to the senior surgeon, Dr. Arnison, who has tendered his resignation. Dr. Arnison, who has been connected with the institution for upwards of thirty years, has already received the thanks of the committee representing the governors for the valuable services he has rendered to the charity during his long career, and he will be appointed consulting surgeon to the infirmary. Everyone regrets Dr. Arnison's retirement from active duty.

Tynemouth Infirmary.

Mr. Edwards of Corbridge has offered to pay the salary of a resident medical officer at Tynemouth Infirmary for three years if the committee will appoint such an officer, and in addition he will make a donation of £100 to the funds of the institution. At present there is no resident medical officer, and the need of one is much felt. It is proposed to amalgamate the dispensary with the infirmary, and till this is accomplished Mr. Edwards's generous offer is to stand over. There can, however, be little doubt that it will be the means of hastening the amalgamation.

March 2nd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh Town Council and the New City Hospital.

AT a special meeting of the Edinburgh Town Council, held last week, the public health committee submitted a report anent the new City Fever Hospital, in which they recommended that accommodation be provided for 600 beds and laid before the council probable estimates of the cost of buildings to accommodate 400, 500, and 600 beds respectively. The estimates ran as follows: For 600 beds, £233 700; for 500 beds, £212,678; and for 400 beds, £131,989. The medical officer of health, the consulting physician, and the medical superintendent of the hospital were all in favour of accommodation being provided for 600 beds. In moving the adoption of the report Bailie Pollard indicated the extent to which demand for accommodation in the hospital had increased during the last few years. Five years ago the average daily number of patients in the hospital had been 150. In the year 1895–96 there had been on an average 302 beds occupied daily, the number ranging from 459 to 250, and he thought the council might be sure that after the new hospital was built the public would be still more ready to send their cases of infectious disease to it for treatment. In seconding the report Mr. Mitchell Thomson argued that, although at present 500 beds might be sufficient for them, it would cost much more in the end if they delayed the erection of part of the hospital. In the discussion that followed there was a considerable difference of opinion as to the size of the proposed hospital. The accommodation provided for fever patients in such towns as Glasgow, Sheffield, Leeds, Manchester, and Dundee was cited as showing that the proposed accommodation in the new hospital was much in excess of what the population in Edinburgh required. Glasgow with its population of 703,000 had 700 fever beds, Manchester with 536,000 of population had 580 beds, Leeds with 402,000 had 400 beds, and in Sheffield, where the inhabitants numbered 350,000, they had only 234 beds; while in Edinburgh, with a population of only 292,000, they proposed erecting accommodation for 600 fever patients. In the end 25 votes were given for 600 beds, and 11 for 500. The recommendation in the report of the public health committee having thus been adopted it was remitted to the public health committee to obtain estimates for the work.

Royal Edinburgh Asylum for the Insane.

The annual meeting of the corporation of this asylum was held in Edinburgh last week, when the managers' report showed a very satisfactory position. After its adoption Dr. Clouston presented his annual report as physician-superintendent. In it he stated that the total number of patients treated in the asylum during the year had been 1354, the average daily number being 901. There had been 115 deaths, 70 of whom were men and 45 women. Dr. Clouston spoke of the limitations that continually met them in their treatment of disease, and showed how the brains of many human beings were doomed, even before birth, as a result of heredity and how a man's brain might be so treated by himself as to bring about pathological changes that could not be recovered from. He spoke of the terrible damage done by an excessive indulgence in alcohol, and stated that during the past year drinking had been the cause of insanity in an unusually large proportion of their cases. He thought that this was possibly due to the fact that the previous winter had been an open one and trade good, and therefore money more plentiful. Dr. Clouston said that the past year had been one of those common since 1890 in which cases of depression of mind were equally frequent with those of morbid elevation of mind. He believed influenza to be the cause of this change of type in mental disease. It had appeared in this country in 1890, and had never since left it. The appearance of this powerful influenza poison in the world was to him the most striking medical fact of his time. He went on to state that the progress of the year had been satisfactory and the health of the patients on the whole good. Speaking of his visit to the East last spring, Dr. Clouston contrasted the treatment of insane patients in the East and at home, saying that an asylum he had seen at Damascus when compared with Craig House was as Hades to Paradise. The Eastern Christian looked on an insane person as one possessed by the devil, and treated him with terrible forms of exorcism. The Mohammedan, on the other hand, looked on insanity as an evidence of special favour from the Almighty, and he was therefore tolerably kind to those thus afflicted.

Medical Lectures at Glasgow.

At a meeting of the Glasgow Philosophical Society on the 1st inst. Dr. Neil Carmichael read a paper on House Sanitation, in which he discussed the circumstances in connexion with the house which influence health, and more especially as these exist in large cities. Dr. Carmichael argued that frequently health was prejudiced by gas filtering through the soil, a condition which could only be met by laying the whole basement with concrete. In connexion with drainage he advocated that all appliances for the removal of waste should be placed in shafts or towers shut off by doors from the house proper. He pointed out that in Glasgow the prevalence of pulmonary tuberculosis was inversely as the cubic space in the house per occupant. This was as distinctly a lesson teaching the need for fresh air as cholera demonstrated the need for pure water. If the lesson were learned with regard to the construction of houses, the arrangements of streets, and the provision of open spaces, the health of the city would be enormously improved. Medical men and sanitary authorities could do something to educate public opinion, but the main responsibility rested upon architects, who practically had the solution of the question in their hands.—At a recent meeting of the Glasgow Dairymen's Association a lecture was delivered by Dr. R. Cowan Lees on Tuberculosis in Relation to Milk-supply.—The free public lectures instituted by the senate of the University of Glasgow continue to realise decided success. On the last occasion Professor John Young, M.D. Edin., was the lecturer, and he attracted a large audience to hear him discourse on the Historical Significance of some of the Coins in the Collection in the Hunterian Museum. The next lecture is by Professor McKendrick, F.R.S., whose subject is to be Sound Waves and the Phonograph.

Glasgow Cancer Hospital.

The annual meeting of subscribers' was held on the 25th ult. The medical report was submitted by Dr. Duncan Macartney, and a report on the district nursing by Dr. Robert Jardine. These were adopted. Speeches defining the position and scope of the hospital were made by Dr. Beatson and Dr. Renton. No one doubts that the hospital does good work in relieving many who suffer from cancer in various forms, but the general verdict of the profession is that all this might have been accomplished without the expense of a hospital to enter into competition with the general hospitals, and without the formal organisation of a new hospital staff.

Handsome Gift to the Dundee Royal Infirmary.

Mr. James Key Caird, Dundee, has sent a letter to the directors of the Royal Infirmary offering to provide the necessary sum to build a hospital for the treatment of diseases of women. The full details of the offer have not yet been disclosed, but it is understood that in the first instance a sum of £5000 is placed at the disposal of the directors.

Woodilee Asylum.

In view of the new regulation obtaining in medicine, the Barony Parish Council on appointing two clinical clerks at Woodilee Asylum, Lenzie, have decided to make the appointments open not only to graduates in medicine, but also to fourth and fifth year students, provided always that such students have taken out classes in practical pathology. The clinical clerks will be boarded in the asylum, and will be provided with railway season tickets between Glasgow and Lenzie to allow of their attendance, if they desire it, on special classes in Glasgow. The appointments are to be for six months, three months on the male and female sides alternately. In special cases a three months' appointment may be made.

Aberdeen and the Queen's Diamond Jubilee.

In connexion with a suggestion by Mrs. Ogston, wife of Dr. Alexander Ogston, Professor of Surgery, University of Aberdeen, that children labouring under incurable disease be admitted to Morningfield Hospital—where at present only adult incurables are received—the expense of the maintenance of such children being met independently of the hospital funds, the directors have passed the following resolutions. Children are to be admitted and steps taken to raise funds for the erection and maintenance of a children's wing in commemoration of the sixtieth year of Her Majesty's reign. Meantime, two small wards (with accommodation each for five children's cots) will be furnished and utilised for the purpose. A new wing, containing two wards, accommodating in all twenty children, besides nurses, will cost £2500 to erect, and the annual expense would be £500. It is believed the scheme will be carried out, especially as it is understood that the Thurburn Trust (about to be wound up) will give a substantial contribution. Mrs. Ogston has already received £45 2*s.* 6*d.* in aid of the project.—The managers of Aberdeen General Dispensary in their annual report refer to the necessity for increased accommodation, and suggest as a commemoration of the Diamond Jubilee that a fund might be raised for the enlargement or re-building of the dispensary. A gift of £250 is stated to be in hand to form the nucleus of such a fund. During 1896 10,056 cases were treated and 34,967 prescriptions were dispensed. There was a deficit for the year, which required £400 to be drawn from the general capital.

The late Brigade-Surgeon-Lieutenant-Colonel D. A. Leslie.

The remains of the late Brigade-Surgeon-Lieutenant-Colonel D. A. Leslie, M.D. Aberd., A.M.S., medical officer in charge of the troops at Perth, were interred with military honours on the 1st inst. in Welshill Cemetery, Perth.

March 2nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Notification of Infectious Diseases Act.

THIS Act, which has been adopted by the corporation of Belfast, came into force on March 1st, and the medical officer of health, Dr. Whitaker, has sent a memorandum to the members of the medical profession explaining very clearly the working of the Act. Many members of the profession think it is rather a pity the corporation adopted the Act before they had done what is absolutely necessary for its being successfully carried out—built a hospital for infectious diseases, as it is impossible really to properly work the Act without having such a place. Never was an infectious hospital more needed than at present, when there is so much zymotic disease in the city—scarlet fever being very prevalent—and when, according to the latest statistics of the Registrar-General for the week ended Feb. 20th, the death-rate had reached the high figure of 30·6 per 1000. At the present time there are only two places available for cases of infectious disease—the Royal Hospital and the Union Hospital. The former institution has only a few fever beds, while the middle and better classes naturally will not go to a union hospital. The corporation decided some time since to build a new infectious hospital, but there would seem to be some extraordinary delay, and up to the present they have not agreed finally on the site.

St. Mark's Ophthalmic Hospital, Dublin.

Mr. R. J. Montgomery, F.R.C.S. Irel., has been appointed assistant surgeon, and Mr. F. Chetwode Crawley, M.B., house surgeon to St. Mark's Ophthalmic Hospital.

The New Hospital for Tyrone.

Arrangements are being made for the holding of a great bazaar next year in connexion with the new hospital in Omagh. The old building there is becoming too small and too antiquated for the demands made on it, and the want of a new building is now being very much felt. It is proposed to inaugurate a committee for the purpose of securing collectors in the different centres in co. Tyrone to raise shilling contributions. The Duke and Duchess of Abercorn, who have granted their patronage for the coming bazaar, are taking the deepest interest in the erection of the new hospital.

Belfast Dispensary Committee.

At the monthly meeting of the Belfast Dispensary Committee, held on March 1st, a letter was read by the secretary from the Local Government Board, enclosing copy of a communication received by them from two members of the committee, who complained of the unpunctuality on the part of the officers of the dispensary station situate at Craven-street, Shankhill-road, Belfast. These two gentlemen alleged that on visiting the dispensary station on the morning of Feb. 8th they found a number of poor people in attendance, but not a member of the staff there except the caretaker. This was shortly after 10 o'clock in the morning, the hour at which the station should open. The first officer appeared at 10.25 A.M., and the others came afterwards. The answer of the officers to the charges was a very complete one. It seems that recently the Registrar-General has (at the suggestion of the Trades' Council) altered the registration hours from 12 to 1 o'clock (on Mondays and Thursdays) and 7 to 8 o'clock (on Saturdays) to 9 to 10 o'clock A.M. and 3 to 4 o'clock P.M. respectively. As a consequence it is quite impossible for the officers to finish their registration duties and be at the dispensary station at ten o'clock in the mornings, the distance from the various places being considerable. After discussing the matter the dispensary committee resolved unanimously that the Local Government Board be informed, in reply to their communication, that the lateness of the hour of attendance of the dispensary officers was due to the time fixed by the Registrar-General for attendance at the registration offices, and request him to change the hour so that it may not clash with the hour for dispensary attendance.

Health of Belfast.

At the monthly meeting of the city council, held on March 1st, it was reported that the health of the city for the past month has been very unsatisfactory, the death-rate being 35·2 per 1000 from all causes, while it was 3·7 from zymotic diseases and 15·9 from chest affections. This terrible mortality from diseases of the respiratory organs is much higher than it has been for a number of years. There is an epidemic of measles and scarlet fever, but the mortality from each is diminishing. The mortality from whooping-cough and typhoid fever still keeps high, and, what is most unusual, eight cases of typhus fever have been reported, with one death. Not for several years has there been a more unhealthy winter than the present in Belfast, and all over the north-eastern part of Ireland there has been an unusual wave of sickness, the mortality of Londonderry being 38·8 per 1000, while further south the death-rate of Dublin has reached the appallingly high figure of 46·3 per 1000.

March 2nd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Hygiene of Marriage.

DR. TOULOUSE has just put forward a scheme which greatly exercises the public mind, although it is not absolutely new. He desires to prevent the marriage of

persons affected with transmissible disease, or at least to punish those who have deceived their partners by concealing before marriage their taint with any malady making the production of degenerate children possible. Dr. Toulouse is a conjoint director of the Mental Asylum of St. Anne in Paris, and has been lately much to the front on account of his book upon Emile Zola. With the view of making a very complete and detailed inquiry into the physical characters of men of genius Dr. Toulouse commenced with Zola, whose personality is allowed to be remarkable, and published in a large volume the most complete details of the eminent author's constitution. His visual acuity, his various psychical re-actions, and details of his special senses all came in for notice, as did the daily *régime* and mode of life, his cardiac and respiratory tracings, and even the amount of urine he passes daily. This "pipi du génie" has greatly amused Parisians, though Zola is known to have agreed to the inquiry in the interest of psychological physiology, of which science he is a declared partisan. Dr. Toulouse's present idea is that selection should be applied to the choice of partners before marriage with the same care that breeders apply to the choice of animals. To eliminate every chance of the transmission of hereditary physiological taint, he would have epilepsy, mental weakness, cancer, recent syphilis, alcoholism, and tuberculosis regarded as obstacles to marriage. He proposes that every Frenchman shall be provided with a "livret sanitaire" in which the medical attendant should be compelled to inscribe the names of certain diseases if the person in question be affected by them, the list of these diseases to be fixed by a committee of medical men. Dr. Toulouse considers that such declarations could be as legitimately exacted from medical men as those notifying epidemic or contagious disorders. The *livret* in question would be deposited at the prefecture, and in fifty years' time instructive tables of statistics on the laws of heredity could be compiled from them. Until then no one, not even a legal tribunal, would have the right to consult these documents, and a system of key numbers would prevent their comprehension by any non-initiated person. At the expiration of that time the conclusions of so vast an inquiry could be enforced by law, but in the meantime Dr. Toulouse considers that we must prevent by every possible means the marriage of persons affected with diseases known to be transmissible. He would compel intending couples to declare their maladies on pain of divorce should concealment be afterwards discovered to have been practised. As an alternative to divorce a fine might be paid to the non-responsible partner in the case of the birth of a sickly child. If a declaration of ill health be made in the marriage contract, and the marriage is agreed to in spite of it, the law will not attempt to stop the union, for that would be an impossibility; but those who wilfully conceal a morbid taint will be regarded as having committed a breach of trust and will have to make reparation for the damage done. It is generally considered that this scheme is purely Utopian, however much it reflects the legitimate wishes of a learned man desirous to prevent the degeneration of the race, and while such procedure would be a violation of individual rights it would considerably augment the number of illegitimate births.

The Decrease of the Birth-rate.

The question of the decrease in the birth-rate has for some time been a burning one in Paris, and a society has been formed to promote the increase of the population and has held numerous sittings. In all the forthcoming Bills dealing with taxation a diminution of taxation proportional to the number of children in a family is proposed. To do away with the fear which parents have of seeing their fortune divided among a numerous family (for the French law demands an equal division), M. Javal proposes to debit every father with three children at least, so that an only son would succeed to but one-third of the estate and two children to only two-thirds. But in spite of the movement the Malthusian Society still has disciples, and a certain gentleman, noted for his unfortunate attempts at the education of the two sexes in common in a municipal school, has published a pamphlet dealing with methods of checking large families. The "Repopulation" Society has asked that this pamphlet shall be made the subject of a prosecution.

Medical Responsibility.

A medical man of St. Nazaire has just been held responsible for an error in diagnosis. A woman was arrested on a charge of infanticide, and an expert declared that she presented all the signs of recent delivery. Two days later she was delivered of a child which died. She therefore prosecuted the medical man, who was fined 1000 francs, although the *procureur-général* asked the court to acquit him.

The Health of the Army.

The War Minister has published an important report addressed to the President of the Republic upon the Health of the Army. It shows an eminently satisfactory state of matters. In 1896 the death-rate was 5·29 per 1000, the lowest that has ever been observed. This result is due to the steady progress of hygiene. Small-pox is decreasing, and in 1896 there were ninety-seven cases and two deaths. Diphtheria, since the employment of the serum treatment, accounts for only twenty-two deaths per annum. Enteric fever also shows a decrease, although there were 2442 cases with 441 deaths. All the barracks are supplied with spring water filtered through a Pasteur-Chamberland filter, and those places where enteric fever was endemic have become absolutely free since the enforcement of this regulation. The report advises for the future the general use of sterilised water, and sterilisers will be constructed for the supply of water in large quantities. Every army corps will have portable sterilisers, which can be transported to the scene of an outbreak of enteric fever.

A Case of Malingering.

The War Minister, in answering a question put to him in the Chamber relative to the death of a soldier at Marseilles, a death attributed to want of care on the part of the military surgeons, said that the man had brought about his illness on purpose. To get off duty and to be sent to the infirmary he ate six portions of haricot beans; intestinal obstruction and gastro-enteritis supervened, from which he died.

A Terrible Mistake.

Dr. Contjean, the son of the director of the medical school at Besançon, a young medical man well known for his work in biological chemistry, has just died at the age of thirty-two years under very sad circumstances. He suffered from gastric pains, and during the night he got up and taking, as he thought, a packet of bicarbonate of soda poured the contents into a glass of water and swallowed them. The packet contained corrosive sublimate, and he died after terrible suffering.

March 2nd.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Alimentation of the Poor.

DR. ANGELO CELLI, professor of hygiene in our University and director of the Gabinetto Igienico at the University Institute, is at work on a series of researches having for their object the improvement of the alimentation of the labouring classes, particularly of the workers in the fields. These latter, or about two-thirds of them, live on the meal of "granturco" (Turkish wheat). Its low nutrient power obliges them to consume it in large quantities, very often bad in quality and rendered still worse by imperfect modes of preparation. The result is seen in their defective physique and, at its worst, in that frightful scourge "pellágra," which, mainly visible in the integument, is also evident in various other lesions, mental alienation included. State medicine has vied with private philanthropic effort to find a substitute for the "granturco," but in vain. It is impossible to combine the two conditions of lower price and superior quality. Professor Celli has set himself to work in another direction to see whether, taking the "granturco" as it exists, its quality and digestibility can be improved without adding to its cost. This result, he thinks, he has attained, at least in one direction—namely, in better grinding processes, from which the meal emerges richer in nitrogenised substances than under the traditional system, while at the same time poorer in husk and indigestible cellulose, and poorer also in fat, which is the chief cause of its rancidity. One defect, however, appeared to neutralise this improvement. Finer and more nutrient, the meal was much less adapted for baking purposes and also

for cooking as "polenta" (porridge). Professor Celli, in consequence of this, has sought a remedy in another mode of manipulating the meal. With the coöperation of several skilled members of the baking guild he has succeeded in turning out a paste either from the "granturco" pure and simple or by the admixture of this with the meal of ordinary grain (in the proportion of from 25 to 50 per cent.). Richer in albuminoid substances than the "polenta" of "granturco," richer in the same substances than paste from the other grain even when of the best quality, this composite paste, relatively to nutrient power, is actually cheaper than the aforesaid "polenta." Professor Celli is anxious to have the results of his laboratory findings tested on a grand scale, and will, it is hoped, receive the countenance and support of the Government in the practical extension of his discovery to the alimentation of the poor.

Feb. 23th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Professor Kaposi and the Socialists.

IN the course of a lecture delivered last week Professor Kaposi said that owing to the mildness of the winter only a few cases of phtheiriasis had recently come under his observation, and he added that sufferers from this disease may be found at the meetings which are about to be held in connexion with the Parliamentary elections. These remarks were repeated by the *Arbeiterzeitung*, a journal which circulates among the working classes, and on the evening of the same day some hundreds of Socialists assembled in front of his house and created a disturbance. Next day the newspapers published a statement by Professor Kaposi in which he denied that what he said was capable of an offensive interpretation, and he moreover referred to the gratuitous treatment which he had freely given to necessitous patients for the last thirty years.

Vomiting and Pregnancy.

Dr. Dirmoser has published in the *Medicinische Wochenschrift* an account of twenty cases of hyperemesis gravidarum which he has observed in the course of eight years. There are, according to Lang, three stages of this complaint. In the first stage the symptoms occur at short intervals varying from an hour to five minutes. In the second stage the pulse is accelerated, the temperature is increased, and the urine becomes turbid; patients presenting these symptoms sometimes recover. In the third, which is the comatose or nervous stage, the vomiting decreases, but there are grave cerebral complications, and sometimes strabismus and jaundice. In six cases in which the urine was analysed a great quantity of urobilin was found, as well as hæmoglobin, acetone, peptone, hyalin, and granular tube casts. The presence of urobilin indicates a decomposition of hæmoglobin in the body, and the tube casts point to serious derangement of the kidneys. In three cases Dr. Dirmoser also observed indoxyl and skatoxyl, substances which are products of decomposition in the intestine and are of great significance, indicating a general poisoning of the system and co-existing with increase in the bulk of the liver, spleen, and kidneys. According to Dr. Dirmoser the disease is due to the enlargement of the uterus irritating the motor nerves, as well as the sympathetic and the vagus, both of which when stimulated cause contraction of the stomach. Experiments made by Conteyon have shown that irritation of the vagus increases the secretion of the glands of the mucous membrane of the stomach, promotes the formation of mucus, which neutralises the acid gastric juice, and causes hyperæmia of the stomach. These effects predispose to the formation of toxins, which is further assisted by the atony of the intestine. Dr. Dirmoser accordingly recommends that the stomach should be washed out with a solution of boric acid, that the gases of the stomach should be absorbed by means of powdered charcoal made from the wood of the lime tree, and that food should be given by the rectum. When the patient is eventually able to take food by the mouth it should at first consist of somatose[1] and rice-water.

The Pituitary Body and the Thyroid Gland.

At the last meeting of the Medical Society Dr. Schiff discussed the influence of the pituitary body and the thyroid gland on the metabolism of the tissues. The relation between these two organs has been studied ever since Marie proved that the pituitary body undergoes a change in cases of acromegaly and suggested that it exercises an influence over tissue change. Hypertrophy of the pituitary body has been observed after extirpation of the thyroid gland and in cases of myxœdema. Experiments made by Dr. Schiff with extract of pituitary body show that it leaves the excretion of nitrogen unaltered, but that it increases the excretion of phosphorus, a result indicating the decomposition of a tissue containing phosphorus, which may be either the structures forming the central nervous system, or, on the other hand, the bones. Dr. Schiff considers that it is the bony tissue which is affected. In his investigations of the functions of the thyroid gland Dr. Schiff made four experiments with iodothyrin, and came to the conclusion that its action is by no means identical with that of thyroid extract, a result quite at variance with the opinions of Baumann, who considered that iodothyrin represents, both quantitatively and qualitatively, the efficient part of the gland. Dr. Biedl then referred to the experiments made by him on cats with a view to the investigation of the symptoms which appear after extirpation of the pituitary body. He operated through the mouth, first performing tracheotomy, then partly dividing the velum palati, and finally opening the base of the cranium with a trephine. Sometimes the animals succumbed to hæmorrhage either from a cranial sinus or from the circle of Willis. In one case the animal lived for twenty-four hours, and then died with peculiar spasms similar to those occurring after extirpation of the thyroid gland, and due no doubt to an extravasation into the middle cranial fossa. He confirmed the results obtained by Oliver and Schäfer, who found that the extract of thyroid gland causes a decrease in the blood pressure, whereas the extract of pituitary body, like suprarenal extract, has the effect of increasing the blood pressure.

Accidental Injuries received at the Time of Death.

Dr. Haberda has published in the *Klinische Wochenschrift* a highly interesting case in which a lesion of a necessarily fatal character was sustained at the moment of death. It not unfrequently happens that dying persons receive severe injuries through falling down as they become unconscious. The results of such accidents, of course, vary in extent and severity, ranging from abrasions and bruises on the forehead, the back of the head, the nose, and the knee to fractures of the nasal bones and the extremities, and even to fracture of the skull with extravasation into the cerebral tissue. Dr. Haberda's patient was a woman, aged sixty-five years, who died suddenly. Post-mortem examination showed that the pericardium was fatty and contained about 40 c.c. of turbid blood. The right heart was soft, and on the anterior aspect, close to the anterior longitudinal furrow, there was a longitudinal fissure of the right ventricle. The mitral valves were hard and the posterior aortic valve was thickened; the entrance to the left coronary artery was contracted, but that of the right was normal. The small quantity of blood in the pericardium indicated that the rupture of the heart was not the cause of death, and the absence of suffusion at the place of the rupture proved that it occurred only after the heart's action had ceased.

Thoracic Diagnosis by Means of the Roentgen Rays.

Professor Benedikt has published an account of the observations made by him with the Roentgen rays on a man who suffered from dyspnœa, and who said that two years ago he had an attack of pneumonia and hæmorrhage from the lungs. On the right side in front there was dulness over the apex and bronchial respiration, and there was also dulness of the left back. By means of the Roentgen rays shadows of the heart and the diaphragm were obtained which showed no change in the position of these organs during expiration and inspiration, so that there evidently was an adhesion between the costal pleura and the diaphragm. There was condensation of the lung tissue, and the shadows cast by the lungs were studded with black patches; moreover, an abnormal shadow extending to the axilla corresponded to a situation where there was dulness without any other symptoms, so that no doubt the pleura was thickened and the pneumonia spoken of by the patient had really been pleurisy. The dyspnœa was due to the interference with the action of the diaphragm and to the diminution of the respiratory surface.

Amusing Reply to an Examination Question.

Medical circles in Vienna have been much amused by an

[1] See THE LANCET, Feb. 2nd, 1895, p. 294.

answer given by a student who was being examined in pathological anatomy and was asked to name the organs of the body in which cysts most commonly occur. He enumerated several, but omitted to mention the ovary, whereupon the examiner good-naturedly said: "Try to think of an organ which you do not possess," and the candidate, who was of Jewish extraction, immediately replied: "Oh, the prepuce"!

Feb. 23th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Pilgrimages to Mecca.

WE are now well advanced in the Mussulman fasting month of Ramadan, and very soon the devout will be making preparations for the annual pilgrimage so as to be at the holy places before the great feast which will take place this year about April 13th. The French have very properly stopped all idea of pilgrimage from their colonies. The Indian Government seems afraid to take this step, and the Khedive of Egypt can hardly be expected to be more courageous than his English advisers. The Hadj of last year was the largest since 1893, partly because the chief day of the feast fell on a Friday, and the year was therefore considered to be a sacred one; 62,000 pilgrims landed at Jeddah, and the concourse at Mouna was reckoned at 250,000. Jeddah, in spite of its population of 20,000 people, had no money for scavenging purposes, because the Customs revenue destined for sanitation was swallowed up in paying the Government officials, whose salaries were eight months in arrear. The stinks and dangers in the town of Jeddah can be better imagined than described. It is true that the Sultan sent three medical men from Constantinople to inspect, a pasha and two beys, and they reported well of everything they saw. There was no cholera during last year's Hadj, but plenty of small-pox and a corresponding dearth of vaccine, while the other chief diseases were malarial fever, dysentery, and rheumatism, all treated by one sovereign remedy—the actual cautery! One of the greatest wants is a railway from Jeddah towards Mecca. There is apparently no religious difficulty to this, but the amount of backsheesh required by the Bedouins is so enormous that the idea has been reluctantly postponed. One Arab tribe lives during the whole year upon the results of dastardly murders committed by it upon unprotected pilgrims. Nothing can be reformed until the Powers coerce Turkey. Every pilgrim should be provided before landing at Jeddah with a certificate of good health and at least £15 in his pocket. Many now land with less than 15*s.* in their possession, and hundreds are sent back every year by charitable persons. The British Indian pilgrims, I am ashamed to say, are the greatest offenders, about half of them being paupers. The Javanese, on the other hand, are the richest, because Holland insists on every pilgrim possessing an adequate sum. The Persians are universally pitied, because their Consul-General is said to levy very heavy contributions on them. In fact, the pilgrims are robbed everywhere—in Jeddah, *en route* by the Bedouins, and then again at Mecca. The Grand Shereef himself is a famous robber, and among other perquisites receives 3*s.* for each camel hired by the pilgrims. He is not very rich himself by all accounts, because of the large presents he has to send to Turkey. This completes the vicious circle, for it is Turkey which stops all sanitary reform in the Hedjaz, and it is idle to expect that Turkey will ever seriously mend matters there until she is forced to do so by the European Powers. When Europe found herself menaced by plague from Egypt in 1820 she compelled Egypt to create sanitary reforms up to the level of the European knowledge of the day. Has not the time come for Europe to put similar pressure on Turkey and the holy places?

Strongylus Subtilis.

This hitherto unknown worm was discovered at several necropsies in Cairo and Alexandria by Dr. Looss in 1895, and was then reported by him.[1] In the fæcal matter of one of Dr. Sandwith's ankylostomiasis patients, an Egyptian peasant, Dr. Looss has now discovered the eggs of the strongylus subtilis, and this is necessarily the first time that this parasite has been recognised in a living patient. The man now being studied is improving under the ordinary thymol and iron treatment.

[1] Centralblatt für Bakteriologie und Parasitenkunde, Band xviii., No. 6.

Medical Appointments.

Crookshank Pasha, who has been Director-General of the Prisons Department in Egypt since its creation by Mr. Clifford Lloyd in 1884, has now been promoted to the important post of English Controller of the Daira Sanieh. This post carries with it a salary of £2050 a year, and is by far the most lucrative appointment which has yet been given to an English medical man in this country. The Daira Sanieh consists of the personal estate of the Khedive Ismail Pasha, and was reclaimed from him in 1876, at the time of settlement of the national debts. It comprised originally more than 400,000 acres, nearly all being cultivated land, chiefly sugar estates and factories; but to try to reduce the yearly deficit on the revenue several parcels of land have of late years been sold or exchanged to Government servants in lieu of pensions. The Prisons appointment has now been given to the Chief of the Cairo Police. This is, at first sight, a retrograde step, for the weak point of the Egyptian prisons has so far been hygiene and not discipline. It is apparently intended that the future sanitation of the city and provincial prisons shall be regulated by the already deeply pledged sanitary department. Dr. Warnock of the Government Lunatic Asylum and Dr. Wilson, Professor of Physiology at the Medical School, have both had their appointments permanently confirmed. Dr. W. Grant, a son of the late Dr. Grant Bey, has been appointed to the second medical post at Mombasa.

Animal Vaccine Institute.

The statistics for 1896 are very satisfactory. The number of primary vaccinations in Egypt during the year was 17,176 and of these only 577 failed. It must be remembered in addition not only that the vaccinators are all natives, but also that the custom of the country is to vaccinate each child on both its arms. This really means, therefore, a double number of successful results.

Feb. 24th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

The National Museum of Hygiene.

WHILE the museum concerns hygiene generally, it has much to do with ships. Here quarters and berths are arranged for the sick on shipboard in models representing several methods. There should be seen in this exhibit a perfect hospital ship—one equipped with all modern conveniences in addition to the best medical and surgical means—as an example for those who construct as well as for those who use. The present sick-bays of warships are altogether inadequate to the exigencies of battle, and berth-decks, or rather makeshifts, could in no manner meet requirements as would properly constructed special hospital ships. These would, indeed, be floating homes of refuge, recognised by all nations as sacred to the unfortunate. In another portion of the building there is a ship-disinfecting apparatus, by the use of which long detention at quarantine is unnecessary, for with it purification is rapidly accomplished in the various parts of the vessel, while all germs contained in the clothing, bedding, &c., of passengers and crew are destroyed by a separate process. In the latter work the possibly infected material is subjected to extreme degrees of heat in closed cylinders, in which are moveable carriers, mounted upon a wheel track used for running material in and out. In fumigating a vessel with the apparatus mentioned two sulphur furnaces are used—one on a tugboat which lies alongside, and the other located on a wharf and mounted upon a track, so that it can be wheeled opposite any part of the ship. Each furnace is provided with a rotary suction blower driven by a steam-engine and connected with the hold of the vessel by galvanised iron pipes. The air is drawn from the hold through one pipe, forced over large pans of burning sulphur, and is driven back through another duct into the hold purified by heat and mixed with sulphur dioxide. While it has been said upon good authority that the best way in which to take wounded men from the hold is to carry them upon the back, effective mechanical arrangements for this purpose

have been invented, and the exhibit contains a number of these. The Museum of Hygiene offers a fine opportunity for the medical student in Washington, and many avail themselves of this source of information. Classes from the Naval Medical Department find here much that has to do with the hygienic care of ships and the prevention of epidemic disease.

The Common Communion Cup.

The rector of the Church of the Advent, East Oakland, California, has asked the Board of Health to take such steps as will do away with the common communion cup now used in the celebration of the sacrament. He thinks it is dangerous, and the more since California is a sort of "Mecca" to which phthisical pilgrims from every part of the United States come. "As a result there is a greater percentage of so-called consumptives in the population of California than anywhere else except Colorado. As consumption is now definitely known to be a contagious disease, and as all Christians attend to their religious duties more faithfully when ill than at other times, it follows that there is a particular need of safeguards in this State about the common cup in the communion service. May your petitioner presume to ask which member of your board would be willing to sip from a cup from which fifty strange persons had drunk, some of whom were known to be affected with phthisis pulmonalis?"

"Sweat Shops" in High Places.

According to recent investigation by the factory inspectors some of the most fashionable millinery and dressmaking establishments in New York City are quite as veritable "sweat shops" as are to be found in the tenement districts of the east side, where clothing is made by wretchedly underpaid workers huddled together in the most narrow and unwholesome quarters. The following is a summary of some of the worst cases. On Fifth-avenue the inspector found twenty-five girls working in a cramped room which would hold only nine if due regard to health and comfort were paid. In another fashionable place the space adapted to eighteen girls actually held twenty-eight. In a dressmaking establishment twenty-seven were found working where there should have been but thirteen. Miss Cane, the inspector, says that insanitary crowding is general among the fashionable establishments. The lower floors are usually spacious, with luxurious furnishings. The upper floors, where the girls work from early morning until midnight, are cramped and crowded in as direct a violation of the State laws as any place discovered in the poorer class of tenement houses.

A Training School for Coloured Women.

The scheme of the New Orleans University Medical College to found a training school for coloured women as nurses is well under way and is assured of success. The aim is to supply at moderate rates nurses who will be competent for all the duties performed by white nurses and willing and able also to relieve the strain put upon an ordinary household by sickness, instead of, as is now sometimes the case, aggravating it. Careful inquiry was made by the physicians interested in the movement to make sure that there would be a paying demand for the graduates of the school, and the result was satisfactory. No one who has had much experience with sickness is ignorant of the fact that the trained nurse of to-day is, though indispensable, extremely expensive, directly and indirectly, or that there may be many cases in which less costly, even if less accomplished, attendants would be a great convenience. If coloured girls can be trained to meet this need—and they unquestionably can—it will open to their race an occupation which those fitted by intelligence and character now entirely lack.

Semi-centennial Anniversary of the Academy of Medicine.

The semi-centennial anniversary of the New York Academy of Medicine occurred on Jan. 29th. An audience of upwards of 3000 citizens assembled in Carnegie Hall, and among the distinguished persons on the stage was the President of the United States. Of the 150 physicians who assisted in the organisation of the Academy fifty years ago only eight are still living. Dr. Lewis A. Sayre, one of the incorporators, was present and addressed the meeting. Dr. Purple, a former President and an original member, gave a history of the growth of the Academy and especially of its library, which is now second only to the library of the Surgeon-General at Washington. The ceremonies were concluded with an address by the President of the United States on "The Physician as a Citizen." After alluding to the evils of unrestricted charlatanism he remarked: "I need not suggest that such evils are allowed to exist by reason of the insufficiency of our laws or a laxity in their execution. I have intimated that for this condition you are not responsible in a professional sense; but are you sure that as citizens you are doing all in your power to remedy the situation? We cannot but think that the discoveries and improvements in the medical practice which we now enjoy are dearly bought if the members of the profession in their onward march have left behind them their sense of civic obligation and their interest in the general public welfare. We cannot accuse you of utter neglect of your duty to the country; and yet we cannot keep out of mind the suspicion that if your professional work in exposing evils were more thoroughly supplemented by labour in the field of citizenship these evils would be more speedily corrected. If laws are needed to abolish abuses which your professional investigations have unearthed, your fraternity should not be strangers to the agencies which make the laws. If enactments already in force are neglected or badly executed, you should not forget that it is your privilege and duty to insist upon their vigorous and honest enforcement. If members of your profession were oftener found in our national and State legislative assemblies ready to advocate the reformatory measures you have demonstrated to be necessary and to defend your brotherhood against flippant and sneering charges of impracticability, the prospect of your bestowal upon your fellow-men of the ripened results of your professional labour would be brighter and nearer. You will, I hope, permit me, in conclusion, to enjoin upon you the duty of an active and general interest and participation in public affairs for the promotion of your country's good in all its phases. No object of personal ambition and no activity of professional life should be permitted to withhold from our Government the tithe of devotion and service due from its thoughtful, intelligent, and educated citizens."

Feb. 20th.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates passed in the under-mentioned subjects in February:—

Surgery.—J. T. Brickwell, Guy's Hospital; E. C. Corfield, St. Bartholomew's Hospital; C. E. Covernton, Guy's Hospital; C. I. Ellis, Aberdeen and St. Thomas's Hospital; H. Fulton, Guy's Hospital; F. Harvey, St. Bartholomew's Hospital; H. Lewkowitsch, Breslau; H. H. Monckton, King's College; C. W. Moore, Manchester; A. W. Oxford, Charing-cross Hospital; F. M. Simmonds, Edinburgh; E. G. Smith, Westminster and London; and S. K. Vines, Birmingham.

Medicine, Forensic Medicine, and Midwifery.—G. W. Dutton, Middlesex Hospital; R. B. Greaves, Sheffield; J. L. F. De Gannes, University College; F. Harvey, St. Bartholomew's Hospital; G. E. H. Sargent, London; and S. F. Smith and L. W. Seymour, St. George's Hospital.

Medicine and Forensic Medicine.—H. R. Rice, Birmingham and London.

Medicine.—P. H. Collingwood, St. Thomas's Hospital; T. Jones, Middlesex Hospital; C. W. Moore, Manchester; A. P. Mürtz, King's College; and F. M. Simmonds, Edinburgh.

Forensic Medicine.—E. P. Hewitt, St. Mary's Hospital; and J. P. Race, Manchester.

Midwifery.—F. Adams, St. Thomas's Hospital; A. H. Grace, Bristol; and M. Sharp, Royal Free Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery: Messrs. Dutton, Fulton, Grace, Harvey, Hewitt, Mürtz, Oxford, Race, Sargent, S. F. Smith, and Miss Sharp.

ROYAL WEST OF ENGLAND SANATORIUM, WESTON-SUPER-MARE.—The annual meeting of the Royal West of England Sanatorium, Weston-super-Mare, was held on Feb. 13th, under the presidency of Sir C. D. Cave. The honorary secretary in his report stated that the receipts were £3016, which with a balance brought forward from 1895 of £601 made a total of £3617, as against £3415 the previous year. The expenditure was £2950, as against £2814 in 1895. The number of convalescents admitted had been 1441—viz., 782 men and 659 women; last year 1391 had been admitted (643 men and 748 women). The hot and cold sea water baths still continue to afford invaluable benefit to many convalescents. The number of baths taken during last year was 5078, the number in 1895 being 4198. The report adds that these baths are of immense importance to the institution.

FOREIGN UNIVERSITY INTELLIGENCE.—*Rouen:* Dr. Albert Martin has been appointed Professor of Clinical Midwifery.—*Heidelberg:* Dr. Karl Kaiser has been appointed Extraordinary Professor of Physiology.

CLEVEDON COTTAGE HOSPITAL.—In the recently issued report of the Clevedon Cottage Hospital it is stated that a larger number of patients were received at the hospital during the past year than during any preceding year. There were 91 cases admitted, and 55 were discharged as recovered, 20 as improved, 3 as no better, 2 were removed, 1 died, and 10 remain. The receipts from all sources were £446, payments were made to the extent of £420, and a balance of £26 remains.

ABERYSTWITH INFIRMARY AND CARDIGANSHIRE GENERAL HOSPITAL.—The annual meeting of the subscribers of the Aberystwith Infirmary and Cardiganshire General Hospital was held on Feb. 6th, under the presideney of Mr. H. C. Fryer. The report showed that 183 patients had been admitted during the year, as against 175 in 1895. There had also been 1449 out-patients, being a decrease of 67 from the previous year. There was an adverse balance at the end of the year of about £12. Mr. J. G. W. Bensall was elected President.

CRIME IN NEWPORT (MON.).—The annual report of the head constable of Newport (Mon.) shows that the number of indictable offences reported to the police during 1896 were 355, for which 293 persons were apprehended or summoned—viz., 230 males and 63 females. This showed a decrease of 80 offences reported and 23 persons arrested or summoned as compared with 1895. Of the 293 persons proceeded against, 270 were tried summarily, 8 were discharged on withdrawal of prosecution, 4 were discharged on the evidence, and 11 were committed for trial.

MUNIFICENT BEQUESTS.—Mrs. Worthington, widow of the late Mr. William Henry Worthington, head of the well-known firm of brewers, who died last week, has left her residence, Derwent Bank, Derby, to the Derbyshire Infirmary for the purpose of a convalescent home. Should the infirmary authorities deem the mansion unsuitable they are empowered to sell it and benefit the institution to the amount of £10,000. There are other bequests for charitable purposes amounting in the aggregate to £50,000.

LISKEARD COTTAGE HOSPITAL.—The first annual meeting of the Liskeard (Cornwall) Cottage Hospital was held on Feb. 18th. The report stated that from April 28th, 1896 (when the building was opened by Mrs. Passmore Edwards), to the end of the year fifty-four patients had been admitted and eighteen out-patients had been treated. The total expenditure had been £543 and the receipts £615, leaving a balance of £72 in hand. The receipts include a cheque for £200 from Mr. Passmore Edwards towards furnishing the hospital, the total cost of which, including the dispensary, amounted to £320. Mr. Edwards was re-elected patron.

ROYAL UNITED HOSPITAL, BATH.—On Feb. 16th the Earl and Countess of Cork assisted at the opening of a bazaar which has been organised at Bath for the benefit of the Royal United Hospital. The funded income of the hospital is £500, and at the close of 1896, notwithstanding the receipt during the year of legacies amounting to over £2000, there was an adverse balance of £1245. The present hospital was opened in 1826. A new wing was added in 1865, and more recently a children's ward has been provided. Better accommodation for the nursing staff and a new kitchen are urgently required, and so it was decided to hold this bazaar, by which it is hoped to raise a sum of at least £1500.

HEALTH OF TAUNTON.—Dr. H. J. Alford, the medical officer of health for the urban and rural districts of Taunton, in his annual report for 1896, states that in the urban district the birth-rate was 31·9 per 1000, the death-rate 16·9 per 1000, the zymotic death-rate 3·5 per 1000, and the infant mortality 145 per 1000 births. The health of the town during 1896 was remarkably good, and had it not been for an epidemic of measles, which caused a heavy mortality, the year would have compared most favourably with its predecessors. In the rural district the birth-rate was 29 per 1000, the death-rate 14·2 per 1000, the zymotic death-rate 1·04 per 1000, and the infant mortality 79·5 per 1000 births. The number of cases admitted to the sanitary hospital during the year was 65.

IT is arranged that the tenth annual Cookery and Food Exhibition shall be held from May 12th to May 19th at the Niagara Hall, St. James's-park. Further particulars respecting the exhibition may be obtained from the honorary secretary, 329, Vauxhall-bridge-road, S.W.

PRESENTATION TO A MEDICAL MAN.—On Feb. 18th a handsome walking-stick was presented to Mr. John Howard-Jones, M.B., C.M., D.Sc. Ed., by the ambulance class of the Newport (Mon.) borough police force, as a mark of appreciation for his services as honorary lecturer of the St. John Ambulance Class.

SALISBURY INFIRMARY.—The half-yearly statement of the receipts and expenses of the Salisbury Infirmary has just been issued. The total receipts, including church collections £756, subscriptions £922, donations and legacies £522, made a total of £3422, and the expenditure amounted to £4006, leaving a balance of £584 due to the treasurer.

WILTSHIRE COUNTY ASYLUM.—The visiting committee of the Wiltshire County Asylum have decided on the erection of a new boiler house and other additions connected with the provision of steam for heating, cooking, &c., and to raise by loan for such purpose and for the installation of electric lighting at the asylum a sum of £5000 in addition to the loans previously sanctioned by the county council.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—The annual meeting of the subscribers to Weston-super-Mare Hospital and Dispensary was held on Feb. 15th. The report showed that 341 patients had been admitted and that 602 out-patients had been treated. The casualties relieved were 881. The dispensary now has 2650 members entitled to claim its benefits. The expenditure slightly exceeded the income, the year beginning with a surplus of £27 and ending with a deficit of £4.

ROYAL PORTSMOUTH HOSPITAL.—At the annual meeting of the Portsmouth Hospital, held on Feb. 23rd, plans were presented of a new hospital which it is hoped will ultimately be built on the present site. This will be done gradually. In commemoration of the sixtieth year of Her Majesty's reign it is proposed to erect two new pavilions, each to contain forty beds. Miss Weston, "the sailors' friend," who has recently been an inmate of the hospital after a serious bicycle accident, has contributed through Mr. Rundle, F.R.C.S. Eng., £100 to the building fund, which now amounts to over £6500.

FOOTBALL CASUALTIES.—In a match played between Clifton and Bridgwater Albions on Feb. 20th, at Bristol, a member of the former team dislocated his knee.—On the same day, during a match between Middlesbrough and Stockton Corporation Officials, one of the players fractured his clavicle.—In a match on Jan. 30th last, between the Star Athletic and Homerton Clubs, a player, a youth of Bromley-by-Bow, aged fifteen years, received a blow on the head, from the effects of which he gradually became worse, and died last week from exhaustion.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A clinical meeting of this society was held at Stanley's, Lavender-hill, on Feb 10th. Dr. Benjamin Duke being in the chair. Mr. John Gay showed a Skiagram of a case of Fracture about the Elbow in a Child. Mr. J. B. Howell showed a Fœtus with Spina Bifida. Mr. A. E. Dodson read short notes on the following: (*a*) a case of Spina Bifida; (*b*) a case of Unusually Slow Pulse; and (*c*) a case of removal of Foreign Body from the Ear. Mr. T. A. I. Howell read short notes on a case of Vaccination with Rare Complications.

MANCHESTER AND SALFORD HOSPITAL FOR SKIN DISEASES.—The annual meeting of the Manchester and Salford Hospital for Skin Diseases was held recently, the Mayor of Salford presiding. The report stated that the number of new out-patients for the past year was 3271 against 3504 for 1895. The committee attributed this decrease of 233 to a considerable extent to a more careful and regular inquiry as to the claims of certain applicants to be afforded charitable relief. Owing to want of funds the in-patient department was small, but had proved to be of great benefit since it was established eighteen months previously. During the year forty-four patients were taken in for treatment. The subscriptions during the year had increased by nearly £100, but the balance-sheet of the year showed a deficit of £330.

NORTH OF ENGLAND CHILDREN'S SANATORIUM.—The annual meeting of subscribers to the North of England Children's Sanatorium was held recently at the institution, Southport, under the presidency of the Mayor, Mr. G. H. Pollard, M.D. Edin. The report showed that 842 children had been inmates during the year, 335 of whom had been sent by the governors of the Cotton Districts Convalescent Fund. The amount received from the children was £937. A recent rule, by which a cot can be appropriated for one year by a donation of fifteen guineas, was becoming much appreciated, nearly £240 having been received on this account.

MIDDLESEX HOSPITAL.—The annual general court of governors of the Middlesex Hospital was held in the board room on Feb. 25th. Mr. Custance (the secretary of the Hospital Sunday Fund) presided, and amongst those present were the Right Hon. Sir Ralph Thompson, K.C.B., Mr. Francis Hoare and Mr. G. J. Marjoribanks (the treasurers), Colonel the Hon. Herbert Eaton, Sir Arthur Townley Watson, Dr. Cayley, Dr. Coupland, and other governors to the number of thirty. The report for the year 1896 spoke feelingly of the great movement set on foot by H.R.H. the Prince of Wales in support of the hospitals, and after dealing with the year's working of the hospital gave some details of the new convalescent home which had recently been opened at Clacton-on-Sea, from which it was to be gathered that there was still the sum of £28,000 to be collected to free this home from debt. During 1896 there were 3598 in-patients, whose average stay in hospital was about twenty-nine days, and among whom there were 355 deaths; there were also 44,484 out-patients treated, whilst 393 patients were sent to convalescent homes. The report also alluded to the satisfactory manner in which the newly constituted Medical School Council was performing its functions. Dr. Coupland, who has held the office of Dean for four years, has resigned that post, and has taken his place as an elective member of the Council. Dr. William Pasteur has accepted the office of Dean, for which he is well qualified by his services as secretary to the Medical School Committee. After the conclusion of the formal business Dr. Cayley, the senior physician, proposed that Dr. Cecil Yates Biss, who had been connected with the hospital for sixteen years, should be granted the title of Physician to Out-patients, which was duly conferred upon him. We understand that H.R.H. Princess Christian has consented to lay the foundation-stone of the New Cancer Wing of the hospital on July 1st next.

COMPLAINTS AGAINST AN ISOLATION HOSPITAL.—Prolonged inquiries by the Guildford, Godalming, and Woking joint hospital board have been held during the last month or two into complaints made by the father of a child who was admitted for scarlet fever. While recovering in the hospital she was accidentally burnt owing to her clothes catching fire through the bars of the fireguard. The father complained and a strict investigation was made, the medical men appearing to agree that the injuries were severe though fortunately not of a permanent nature. Further, the father complained that the child's head was dirty on her discharge. The child was six weeks in the hospital and was reported as "clean" on admission. As to this matter the committee reported that "it is clear that the precautions taken by the staff of the hospital to prevent the transmission of parasites from head to head cannot be said to have been satisfactory." As to a complaint that it was some hours before the child received medical attendance, the committee explained that this arose from the absence of the superintendent and a nurse. On the latter's return the girl was temporarily attended to. The medical man arrived three hours later. As to a complaint of shortness of food, the committee thought this charge unfounded, but said the method of distribution needed amendment. Further, the parents were assured that the case was a slight one; the committee had ascertained that for some days it caused the whole staff much anxiety. Finally, the committee agree that the whole question of the administration of the hospital requires consideration with a view to reform and improvement, and are of the opinion that fuller inquiries should have been made earlier, such inquiries being prevented by a request from the mother that the neglect of one of the staff at the time of the accident might be forgiven. The board are considering the question of reform in committee.

LITERARY INTELLIGENCE.—Messrs. J. & A. Churchill will shortly issue a small work on "Antiseptic Principles for Nurses," by Mr. C. E. Richmond; and "Deformities of the Fingers and Toes," by Mr. William Anderson, surgeon to St. Thomas's Hospital. Also the following new editions: The fifth edition of Dr. Waring's "Bazaar Medicines," revised by Dr. Aitchison; the fourth edition of Tomes's "System of Dental Surgery," with forty new illustrations; and the seventh edition of "Mechanical Dentistry," considerably enlarged by the author, Mr. Joseph Richardson.

UNIVERSITY OF CAMBRIDGE.—Two reports on degrees for women students have been laid before the Senate. One signed by nine members of the Syndicate advocates the grant of the titles of B.A., M.A., D.Sc., and D.Litt., but no medical or divinity degree, to women who take honours in a Final Tripos Examination after the periods of residence in Cambridge required in the case of men. The other, or minority report, signed by five members, while conceding that it may be desirable to grant an academic title to duly qualified women, whether they have resided in Cambridge or not, proposes that the degree should be a new one, like M.Litt. or M.Sc., which would not suggest membership of the University, with its accompanying privileges in regard to government. The majority report rejects an application from the Royal Holloway College that its students may be deemed eligible for titular degrees. The reports will come before the Senate for discussion on Saturday, March 13th. On Feb. 25th the degrees of Bachelor of Medicine and Bachelor of Surgery were conferred on G. E. Hadow, M.A., Caius; L. B. Rawling, B.A., Caius; and H. W. P. Young, B.A., Caius. Dr. A. W. Williamson, F.R.S., Emeritus Professor of University College, London, has been appointed an Elector to the Chairs of Chemistry and Organic Chemistry (Jacksonian), now held by Professor Liveing and Professor Dewar respectively.

DIPHTHERIA IN LONDON.—Fatal diphtheria showed a most decided rise in London last week as compared with earlier weeks, the deaths registered having been 62, as compared with 46, 37, and 40 in the preceding three weeks. The 62 deaths were 27 in excess of the corrected decennial average for the eighth week of the period 1887–96. Islington and Shoreditch were each credited with 6 deaths, Lambeth and St. Pancras each with 5 deaths, and Poplar, Camberwell, and Lewisham sanitary areas respectively with 4 deaths. The admissions to hospital in the week were 102, against 95, 104, and 104 in earlier weeks, and last Saturday there were 855 patients suffering from the disease under isolation. All the 62 deaths were of young persons aged under twenty years. In the Outer Ring there were 7 deaths registered, 4 of which belonged to the West Ham registration district.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Summer Clothing for the Metropolitan Police.

THE Home Secretary has communicated to those who have been taking an interest in the matter that arrangements have at last been made for the issue of light clothing to the Metropolitan Police for use in the summer months.

Verminous Persons Bill.

A Bill with this title is now before the House of Commons. It was introduced on Monday, March 1st, and its purpose is to permit local authorities to provide cleansing and disinfection for persons infested with vermin.

The Whipping of Prisoners.

Mr. Joseph Pease has introduced into the House of Commons a short Bill "to prohibit the personal correction of prisoners." The Bill is down for second reading upon Tuesday, March 30th.

HOUSE OF COMMONS.

THURSDAY, FEB. 25TH.

The Oyster Question.

Mr. Henniker Heaton asked the President of the Board of Trade whether he was aware that, owing to the publication by the Local Government Board of a report on cholera and of another report on oyster culture in relation to disease, public confidence in the wholesomeness of oysters had been so much impaired that the annual consumption of oysters had fallen off to the extent of three-fourths and a large number of the fishing population had been reduced to distress;

whether he had observed that the reports alluded to condemn only a few small oyster layings round the coasts of England, while many of the chief layings, including the whole of those on the coast of Kent, were declared free from contamination; whether he was aware that the Kentish layings thus pronounced free from disease were more extensive than all those in the rest of the kingdom put together; and whether he was aware that they had suffered from the lack of demand equally with the polluted layings; whether, with a view to restore public confidence in a valuable article of diet and assist the fishing population, he would recommend the appointment of inspectors of layings, and also of all shops and stalls for the sale of oysters, authorised to enforce such conditions of sanitation as might effectually safeguard the public against disease; whether he was aware that foreign oysters were frequently introduced into this country from polluted layings, and that the only instance of enteric fever in an epidemic form arising in England from oysters was traced to the eating of Dutch oysters; and whether he would, therefore, recommend that it should be made a penal offence to sell oysters brought from foreign layings without declaring their origin at the time of sale and without plainly marking such origin.—Mr. Ritchie replied: I have little doubt that the reports referred to have, to some extent, impaired the confidence of the public in the wholesomeness of oysters, but I venture to think that my hon. friend over-estimates the decrease in their consumption. I am aware that whilst only a certain number of beds are condemned others have suffered from the reduction in demand. The trade has brought the matter to the notice of the President of the Local Government Board, whose province it is to deal with questions affecting the public health; but if it should be found that the Board of Trade can take any useful action in the matter I shall be ready to give careful consideration to any proposals which may be laid before me. As at present advised, I do not think that the marking of foreign oysters would be either feasible or an efficient remedy.

Vaccination in Ireland.

Mr. Gerald Balfour, replying to a question by Mr. Pinkerton, said the Local Government Board in Ireland have power to issue any regulations they think fit to prevent the spread of dangerous infectious diseases such as small-pox, and thus to compel compliance with the vaccination laws. No boards of guardians in Ireland have refused to do their duty in this respect.

Venereal Disease among the Troops in India.

Lord George Hamilton, questioned by Mr. Cameron as to the terms of the reference to the departmental committee on this subject and the intended action of the Government, made the following statement, viz.:—The terms of reference were as follows: To examine the official returns of venereal disease among British troops stationed in India and to report what changes, if any, have taken place during recent years in the prevalence of such disease and in its character and intensity; also, to obtain and report any information which may be available with regard to the presence of venereal disease and its character and intensity among foreign armies. The report is now under my consideration and will be published. The evidence on which it is founded, being almost entirely documentary, has not been separately recorded, but is embodied or referred to in the report. I am at present unable to say what course may be taken by Her Majesty's Government; but undoubtedly the House will have an opportunity of discussing any decision we may arrive at.

FRIDAY, FEB. 26TH.

The London Water Question.

At the commencement of this sitting the Bill of the East London Water Company was read a second time. Mr. Sydney Buxton took the opportunity of saying that he did not intend to oppose the Bill in any way, because it was essential that the company should have the powers they sought to carry out the projected works. But he felt constrained to express the regret which he believed the ratepayers of London felt that the question of the water-supply of the metropolis was being dealt with piecemeal, thus involving great additional trouble and expense. It had been understood that the Government were prepared to deal with the whole question last session, and that not having done so they would have introduced a Bill this session. But it was evident that they did not intend to legislate on the matter. After the motion for the second reading had been agreed to it was decided to instruct the committee to whom the Bill is referred to insert such provisions as will insure the acquisition by the local authority of such a suitable area of open space as in the judgment of the committee ought fairly to be substituted for the common rights proposed to be extinguished under the Bill. These common rights are over land in the neighbourhood of Tottenham, where the company propose to construct a new storage reservoir.

MONDAY, MARCH 1ST.

The Stamping Out of Rabies.

Mr. Bigwood asked the President of the Board of Agriculture whether his department was now prepared to adopt the recommendation of the departmental committee and make a determined effort to stamp out rabies by exercising directly the powers which they already possess under the Diseases of Animals Act.—Mr. Walter Long replied: There appears to me to be great force in the recommendations of the committee, and I am now engaged in the consideration of some of the practical questions which the adoption of those recommendations involves. I hope to be in a position to make some further announcement on the subject at no distant date.

Food Adulteration.

Mr. Kilbride asked the President of the Local Government Board whether a Bill dealing with the adulteration of food would be introduced this session by the Government, and, if so, when; and whether the Bill would embody the recommendations of the committee which considered the question of food adulteration, or whether it would deal with an amendment to the Food and Drugs Act as distinct from the Margarine Act.—Mr. Chaplin said that the question whether a Bill would be introduced in the present session on this subject must depend on the progress made with other Government Bills. The Bill which had been prepared dealt with the subject as a whole, and it would be premature to make any statement on matters such as those referred to in the latter part of the question.

TUESDAY, MARCH 2ND.

Rabies in London.

Mr. Walter Long, replying to a question put by Mr. Stephens, said that fresh cases of rabies had occurred recently within the metropolitan area, and the circumstances of the situation pointed clearly to the necessity for the issue of a muzzling order applicable to the whole of the metropolitan district irrespective of the boundaries of particular local authorities. The form which such an order should take was now engaging his attention, especially with regard to the description of muzzle to be used, and he hoped to be able to make an announcement shortly.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, Bedford-street, Strand, London, W.C.
Wasted Records of Disease. By C. E. Paget. 1897. Price 2*s.* 6*d.*

CASSELL AND COMPANY, London.
Clinical Papers on Surgical Subjects. By H. W. Page, M.A., M.C. Cantab., F.R.C.S. 1897.
The Practitioner, edited by Malcolm Morris. July to December, 1896.

CHATTO AND WINDUS, 111, St. Martin's-lane, London.
Herbert Fry's Royal Guide to the London Charities. Edited by John Lane. Thirty-third Annual Edition. 1896. Price 1*s.* 6*d.*

CHURCHILL, J. AND A., Great Marlborough-street, London.
A Contribution to the History of the Respiration of Man, being the Croonian Lectures in 1895. By W. Marcet, M.D., F.R.C.P., F.R.S. 1897. Price 12*s.* 6*d.*

CLAUSEN, CARLO, Torino.
Archivio Italiano di Otologia, Rinologia, e Laringologia. Vol. 5. 1897.

COBLENTZ, OSCAR, Berlin.
Pathogenese der Mercuriellen Stomatitis und Salivation. Von Dr. Alfred Lanz. 1897.

COX, HORACE, Bream's-buildings, London, E.C.
Pheasants: their Natural History and Practical Management. By W. B. Tegetmeier. Third Edition. 1897. Price 7*s.* 6*d.*

FISCHER, GUSTAV, Jena.
Ueber Eierstockstuberkulose. Von Dr. J. Schottlaender. 1897.

HIRSCHWALD, AUGUST, Berlin.
Die Mikroskopische Diagnose der Bösartigen Geschwülste. Von Dr. David Hansemann. 1897.

LEWIN, T., AND CO., Amen-corner, Paternoster-row, London.
International Clinics: a Quarterly Collection of Clinical Lectures, Edited by J. Daland, M.D., Philadelphia, J. M. Bruce, M.D., F.R.C.P. Lond., and D. W. Finlay, M.D., F.R.C.P. Aberd. 1896-97 Series. Vols. I., II., and III. 1896. Price 12*s.* 6*d.* net per volume.

LEWIS, H. K., Gower-street, London, W.C.
Ligaments, their Nature and Morphology. By J. Bland Sutton. Second Edition. 1897. Price 4*s.* 6*d.*
A Handbook of the Diseases of the Eye and their Treatment. By H. R. Swanzy, A.M., M.B., F.R.C.S.I. Sixth Edition. Illustrated. 1897. Price 12*s.* 6*d.*

MEYER, JOH. H., Braunschweig.
Die Farbenblindheit und ihre Diagnose. Von Dr. M. Ohlemann. 1897.

REBMAN PUBLISHING COMPANY, Adam-street, Strand, London.
Anomalies and Curiosities of Medicine. By G. M. Gould, A.M., M.D., and W. L. Pyle, A.M., M.D. Illustrated. 1897. Price 34*s.*
Injuries and Diseases of the Ear. Being Reprints of Papers on Otology. By Macleod Yearsley, F.R.C.S. 1897. Price 2*s.*

SCIENTIFIC PRESS, Southampton-street, Strand, London, W.C.
The Menopause and its Disorders. With Chapters on Menstruation. By A. D. Leith Napier, M.D., F.R.C.S. Edin., M.R.C.P. Lond. 1897. Price 7*s.* 6*d.* net.

SMITH, ELDER, AND CO., Waterloo-place, London.
An Account of the Life and Works of Dr. Robert Watt. By James Finlayson, M.D. 1897. Price 3*s.* 6*d.*

SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE, Northumberland-avenue, London, W.C.
Our Secret Friends and Foes. By Percy F. Frankland, Ph.D., B.Sc. Lond., F.R.S. Third Edition. 1897. Price 3*s.*

SPOTTISWOODE AND CO., Gracechurch-street, London, E.C.
Minutes of the General Medical Council and its Various Committees and Branch Councils for the year 1896, with 22 Appendices. Vol. XXXIII. 1897.

THE NEW SYDENHAM SOCIETY, London.
A Collection of the Published Writings of William Withey Gull, Bart., M.D., F.R.S. Edited by T. D. Acland, M.D. Memoir and Addresses. 1896.

WHITAKER'S ALMANACK OFFICE, Warwick-lane, London, E.C.
A Directory of Titled Persons for the year 1897. Designed as a Companion to Whitaker's Almanack. Price 2*s.* 6*d.*

WRIGHT, JOHN, AND CO., Bristol.
Herbal Simples, Approved for Modern Uses of Cure. By W. T. Fernie, M.D. Second Edition. 1897. Price 6*s.*
Elementary Bandaging and Surgical Dressing. By W. Pye, F.R.C.S., and G. B. Smith, F.R.C.S. Seventh Edition. 1896. Price 2*s.*
The Medical Annual and Practitioner's Index. 1897. Price 7*s.* 6*d.* net.

The Physician's Formula Book, Fourteenth Edition (McKesson and Robbins, New York, 1897).—Queen Victoria's Bounty, or the Voluntary

Penny, a Suggestion to John Bull (E. Marlborough and Co., 51, Old Bailey, London, E.C.); price 2d.—The Proposed Jungfrau Railway, rising to an altitude of 13,670 feet, considered from its Scientific, Technical, and Financial Aspects; with maps, plans, &c (F. Schulthess, Zürich, 1897).—Clinical Excerpts relating to the New Pharmaceutical Products of the Farbenfabriken vorm Friedr. Bayer and Co., Elberfeld, Germany (English Offices, Elberfeld Farbenfabriken Company, St. Dunstan's-hill, London, E.C.).—Archiv für Schiffs- und Tropen-Hygiene unter besonderer Berücksichtigung der Pathologie und Therapie, 1 Band, 1 Heft (Th. G. Fisher and Co., Cassel, 1897).—Chirurgia: Edited by Professor P. E. Diakonov; vol. i., No. 1, (Moscow, Jan., 1897).—Catechism Series: Surgery, part 4 (E. & S. Livingstone, Edinburgh); price 1s. net.—Russian Surgery, Part 13. (St. Petersburg. 1897).—Journal of Medical Chemistry and Pharmacy, (St. Petersburg, Dec., 1896).—Encyclopædic English-German and German-English Dictionary: by Muret-Sanders. Teil II. Deutsch-English (H. Grevel and Co., King-street, Covent-garden, London, 1897).—Moods, their Mental and Physical Character: by F. Phillips (J. & A. Churchill, London, 1897).—Die Chirurgische Asepsis der Hände: von Dr. W. Poten (Williams and Norgate, Henrietta-street, Covent-garden, London).—Die Lepra im Kreise Memel: von Dr. A. Blaschko (Williams and Norgate, London, 1897).—Magazines, &c., for March: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, and English Illustrated Magazine.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ASHBY, WM., L.S.A., has been appointed Medical Officer for the Ninth Sanitary District of the St. Saviour's Union, Southwark.

BABINGTON, S. N., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

BARKER, T., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Corfe Sanitary District of the Wareham and Purbeck Union.

BINCKES, F. W., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

BURTON, R. G., M.D. Edin., L.R.C.S. Edin., has been re-appointed Medical Officer by the Greenford Urban District Council.

BYASS, THOMAS SPRY, L.R.C.P., M.R.C.S., has been appointed Medical Officer and Public Vaccinator for the Dorchester District of the Wallingford Union, vice Wm. C. Byass, resigned.

DAWNAY, A. H. P., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

DRINKWATER, R., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Llangollen Sanitary District of the Corwen Union.

FAIRBAIRN, J. S., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

GERVIS, F. H., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

GILBERT, L., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

GURNEY, ALEXANDER C., M.B. Lond., M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Senior House Surgeon to the Blackburn and East Lancashire Infirmary.

HAMILTON, SAMUEL, B.A., M.B., B.Ch. R.U.I., has been appointed Medical Officer and Public Vaccinator to the Marshfield District of Newport (Mon.) Union.

HEPBURN, WM. A., M.D. St. And., F.F.P.S. Glasg., has been re-appointed Medical Officer of Health by the Durham Rural District Council.

HICHENS, P. S., M.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been appointed Senior Ophthalmic House Surgeon to St. Thomas's Hospital.

HOLDEN, J. F., M.B., C.M. Edin., has been appointed Assistant House Surgeon to the Preston and County of Lancaster Royal Infirmary.

HOME, A. L., L.R.C.P., M.R.C.S., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

HOPKINSON, E., B.A. Oxon., L.R.C.P., M.R.C.S., has been appointed Junior Ophthalmic House Surgeon to St. Thomas's Hospital.

JEPSON, EDWD., M.D. Durh., M.R.C.S., has been re-appointed Medical Officer of Health by the Durham Rural District Council.

JONES, C. E., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

JONES, J. M., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Glynceiriog Sanitary District of the Corwen Union.

LOWNE, B. T., M.D. Durh., F.R.C.S. Eng., has been appointed Medical Officer for the Third Sanitary District of the Hartley-Wintney Union.

MACEVOY, H. J., M.D., B.Sc. Lond., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

MARTIN, GEO., L.R.C.S., L.R.C.P. Irel., has been appointed Medical Officer to the Cumberland and Westmorland Convalescent Institution at Silloth.

MARTINEAU, A. J., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

MAY, G. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Ware Union, vice H. May.

MONCKTON, WM., L.R.C.P. Edin., M.R.C.S., has been re-appointed Medical Officer of Health by the Portishead Urban District Council.

MURRAY, WILLIAM, M.A., M.B., C.M. Aberd., has been appointed Junior House Surgeon to the Preston and County of Lancaster Royal Infirmary, vice T. H. C. Derham.

PARSONS, F. J. C., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer of Health for the Bridgwater Urban and Rural Sanitary Districts.

PATERSON, W. H. J., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

PULLEN, RALPH S. McD., L.R.C.P. Lond., M.R.C.S., has been appointed Surgeon to the Provident Institution of the Royal Albert Hospital, Devonport; also Hon. Anæsthetist to the South Devon and East Cornwall Hospital, Plymouth.

RICHARDS, L. W., M.B., B.S. Durh., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

ROBBS, E. C., B.Sc. Lond., M.B. Camb., M.R.C.S., has been appointed Medical Officer for the Workhouse of the Gravesend and Milton Union.

SCATCHARD, J. P., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

SELIGMANN, C. G., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

SHETTLE, R. C., M.D. St. And., M.R.C.S., has been appointed Consulting Physician to the Royal Berkshire Hospital.

SIKES, A. W., B.Sc. Lond., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

STAINER, E., M.A., M.B., B.Ch. Oxon., has been appointed House Physician to St. Thomas's Hospital.

STEPHENSON, D., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer for the Soothill Nether Sanitary District of the Dewsbury Union.

STONE, W. G., M.A., M.B., B.Ch. Oxon., F.R.C.S., has been appointed Clinical Assistant in the Special Dephrtment for Diseases of the Ear at St. Thomas's Hospital.

STRANGE, R. G., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

TAYLOR, G. E. O., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

TOMBLESON, J. B., B.A., M.B., B.Ch. Oxon., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

TUKE, A. W., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

WHITTINGTON, R., B.A. Oxon., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for the Diseases of the Skin at St. Thomas's Hospital.

WRIGHTSON, R. B., M.D., B.Ch. Dub., has been re-appointed Medical Officer of Health by the Aldeburgh Town Council.

YOUNG, EDWD., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Hawkhurst Sanitary District of Crowbrook Union.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

BOROUGH OF CREWE.—Medical Officer of Health for the District of the Borough. Salary £300 per annum. Applications to the Town Clerk, Municipal Offices, Earle-street, Crewe.

BOROUGH HOSPITAL, Birkenhead.—Junior House Surgeon. Salary £60 per annum, with board, lodging, and washing, but no wine, spirits, or beer.

BRISTOL HOSPITAL FOR SICK CHILDREN AND WOMEN.—Assistant House Surgeon for six months. Non-resident. Honorarium of 25 guineas granted conditionally.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician, for six months. Salary at the rate of £30 per annum, and board and residence provided.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Honorary Surgeon.

DUNDEE ROYAL INFIRMARY.—Resident Clinical Assistant. Board, lodging, and washing provided.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark-bridge-road, S.E.—Junior Resident Medical Officer. Salary £50.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark, S.E. — Four qualified Clinical Assistants and eight unqualified Clinical Clerks in the Out-patient Department.

GENERAL INFIRMARY AT LEEDS.—Qualified Casualty Officer. Salary £100 a year, with board, lodging, and washing.

HANTS COUNTY ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £100 per annum, increasing to £125 after twelve months' service, with furnished apartments, board, washing, and attendance. Applications to the Committee of Visitors, Knowle, Fareham.

HOSPITAL FOR WOMEN (THE LONDON SCHOOL OF GYNÆCOLOGY), Soho-square, W.—Clinical Assistants.

HULL ROYAL INFIRMARY.—Honorary Assistant Surgeon for the out-patient department, for five years.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE CHEST AND THROAT, 26, Margaret-street, Cavendish-square, London, W.—Physician-in-Ordinary. Also a Visiting Physician.

LIVERPOOL ROYAL INFIRMARY.—Honorary Physician.

LONDON TEMPERANCE HOSPITAL, Hampstead-road, N.W. — Assistant Resident Medical Officer for six months. Board, lodging, and washing provided, and an honorarium given at the end of the term of appointment.

PARISH OF ST. MARY, Islington.—Two Resident Assistant Medical Officers at the Workhouse and Infirmary, St. John's-road, Upper Holloway. Salary of the first Assistant £120 per annum, and of the second Assistant, who will also be required to act as Dispenser of medicines, £80 per annum. Both will be provided with rations, apartments, and washing. Applications to the Clerk, Guardians' Offices, 131, St. John's-road, Upper Holloway, N.

PARISH OF WESTRAY, Orkney.—Medical Officer and Public Vaccinator. Salary as Medical Officer £90 sterling per annum. Applications to Mr. Jas. Sinclair, Clerk, Parish Council, Westray.

RIPON DISPENSARY AND COTTAGE HOSPITAL, Ripon.—Resident House Surgeon and Dispenser; unmarried. Salary £70 per annum, with board and lodging.

ROYAL SOUTH HANTS INFIRMARY, Southampton.—Assistant Physician.

ROYAL SURREY COUNTY HOSPITAL, Guildford. — Assistant House Surgeon, Board, residence, and laundry provided. No salary.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, Plymouth.—Assistant House Surgeon for six months. Honorarium £10, with board and residence.

SOUTHPORT INFIRMARY.—Junior House and Visiting Surgeon for six months. Honorarium at the rate of £30 per annum. Residence, board, and washing provided.

ST. LUKE'S HOSPITAL, LONDON, S.E.—Clinical Assistant for six months. Board and residence provided.

ST. THOMAS'S HOSPITAL, Albert Embankment, Westminster-bridge, S.E.—Resident Assistant Physician.

TOWNSHIP OF MANCHESTER.—Assistant Medical Officer at the Workhouse at Crumpsall and Resident Assistant Medical Officer at the Workhouse in New Bridge-street, for twelve months. Joint salary of £110 per annum, with furnished apartments, fire, light, washing, and attendance. Applications to the Clerk to the Guardians, Poor-law Offices, New Bridge-street, Manchester.

WOLVERHAMPTON EYE INFIRMARY.—House Surgeon, for twelve months. Salary £50 per annum, with rooms, board, and washing.

Births, Marriages, and Deaths.

BIRTHS.

DURRANT.—On Feb. 27th, at Market Harborough, the wife of T. Arnold Durrant, surgeon, of a son.

MCSWINY.—On Feb. 15th, at Strada Cathedrale, Sliema, Malta, the wife of Staff Surgeon McSwiny, R.N., of a son.

MOORE.—On Feb. 23rd, at Oakdene, Walton-on-Thames, the wife of S. J. Moore, M.D., of a son.

RATTRAY.—On Feb. 24th, at Pemberton-gardens, N., the wife of P. W. Rattray, M.A., F.R.C.S., of a son.

MARRIAGES.

BRICKWELL—SANDERS.—On Feb. 24th, at Chigwell Church, Henry Taylor Brickwell, M.R.C.S., L.S.A., Hainault Lodge, to Laura May, eldest daughter of the late Charles Sanders, M.D., the Haylands, Chigwell.

CARGILL—SHEARWOOD.—On March 1st, at All Saints', Colville-gardens, Lionel Vernon Cargill, F.R.C.S., of Stratford-place, W., to Emma, only daughter of the late William Lachlan Shearwood, of Cromwell-road, South Kensington.

DOVASTON—FOSTER.—On Feb. 25th, at Christ Church, Brondesbury, Milward Edmund Dovaston, M.R.C.S., of Hova House, Hove, to Grace Ethel, second daughter of the late Edward Foster, of Berkhampstead.

HIGGINSON—CHARLTON.—On Feb. 17th, at St. Lawrance's Church, Church Stretton, George Higginson, B.A. Camb., M.R.C.S., &c., to Margaret Whitfield, widow of the late Captain Charlton, of the O.S.N. Co., and of Shanghai.

LEIGH-SODIPE—THOMAS.—On Feb. 17th, at Wesley Church, S. A. Leigh-Sodipe, M.B., L.S.A., eldest son of J. S. Leigh, of Lagos, W. Africa, to Sabbina Patience Oyinkou, daughter of the Hon. J. J. Thomas of Lagos.

MADDOX—WHEELER.—At St. Thomas's, Belfast, Ralph Henry Maddox, M.B., Surgeon-Captain, Indian Medical Service, to Lucy Lillian, fourth daughter of the late Walter J. Wheeler, Lennoxvale, Belfast.

MAYNARD—BISHOP.—On Feb. 25th, at St. Mary Abbot's, Kensington, Edward Charles Maynard, M.R.C.S., L.R.C.P. Edin., of Richmond, Surrey, to Kate, only daughter of the late William J. Bishop, of Richmond, Surrey.

MEYRICK-JONES—BLYTH.—On Feb. 24th, at St. Mary's, Chelmsford, Hugh M. Meyrick-Jones, M.B., B.S., of Guilsborough, Northampton, to Georgiana, daughter of the late Robert Blyth, Solicitor, of Chelmsford.

ROBINSON—STEVENTON.—On Feb. 25th, at St. Andrew's Church, Stockwell, J. C. Reynolds Robinson, M.R.C.S., L.R.C.P. Lond., to Bertha Mary, second daughter of the late William Steventon, M.D., Inspector of Hospitals, Jamaica.

DEATHS.

FASKEN.—On Feb. 1st, at Futtehgurh, North-West Provinces, India, Surgeon-Lieutenant-Colonel Fasken, M.D., elder son of William Fasken, M.D., Deputy-Inspector-General of Hospitals and Fleets, R.N., aged 48 years.

WAY.—On Feb. 21st, at Warrigl, on service with Benin Expedition, Surgeon Richard Henry Way, R.N., M.R.C.S., L.R.C.P., formerly of Wincanton, Somerset, aged 29 years.

WRIGHT.—On Feb. 26th, at Ellerdale-road, Hampstead, N.W., J. C. Hornsby Wright, Deputy-Surgeon-General, aged 66 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.) St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.). City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (9th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (10th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (11th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.). St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (13th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY (8th).—MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr C. B. Lockwood: A Review of the Operation for Excision of the Knee, together with an account of a new procedure (Osteo-plastic Excision of the Knee).—Mr. C. Dent: Some Cases of Intestinal Neurosis.

TUESDAY (9th).—ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8.30 P.M. Mr. H. E. Durham: On the Clinical Bearing of some Experiments on Peritoneal Infection.—Mr. A. Marmaduke Sheild: A Case of a Large solid Tumour removed with success from the Retro-peritoneal Space.

WEDNESDAY (10th).—HUNTERIAN SOCIETY.—Pathological Evening. Dr. A. T. Davies: Ulcerative Endocarditis. Also specimens by Dr. F. J. Smith, Mr. T. H. Openshaw, and Mr. A. H. Tubby.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens:—Mr. K. Gordon: Specimen of the Pharynx from a Fatal Case of Scarlet Fever, treated by Anti-streptococcic Serum.—Dr. L. Lack: Case of a Man after Operation for Sarcoma of Nose, with microscopic specimen.—Dr. D. Grant: (1) Case of Anterior Turbinotomy in an Elderly Man; (2) Case of Anterior Turbinotomy in a Female Patient; (3) Case of Functional Aphonia with Ventricular Band Phonation in an unmarried middle-aged Female.—Dr. J. B. Ball: Case of Chronic Laryngitis in a Man aged twenty-five years.—Mr. H. T. Butlin: Case of Sarcoma of Larynx in a Man aged about forty years.—Dr. St. Clair Thomson: A Man, aged fifty-seven years, who has had Double Abductor Paralysis apparently for twenty-six years, no Tracheotomy; he now presents himself for a new Growth at Base of Tongue.

SOUTH-WEST LONDON MEDICAL SOCIETY (Surveyor's and Sanitary Offices, High-street, Wandsworth).—8.30 P.M. Mr. E. Owen: A Common and an Acute Inflammation of the Bones of Children and Young Persons which sometimes escapes recognition.

THURSDAY (11th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8.30 P.M. Specimens:—Mr. Mayo Robson: (1) Case of Porro's Operation for Suppurating Ovarian Tumour completely blocking the Pelvis, Recovery of Mother and Child; (2) Tubal Mole associated with extensive Intra-peritoneal Hæmatocele.—Dr. Purcell: Myoma Uteri removed by Pan-hysterectomy. Papers:—Dr. Armstrong: On Dr. Beatson's Treatment of Inoperable Cases of Cancer of Mamma.—Dr. Snow: On the Value in Abdominal Malignant Disease of Exploratory Laparotomy *per se*.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-sq., W.).—8 P.M. Card Specimens: Mr. H. Juler: Case of Supposed Congenital Pigmentation of the Retina. 8.30 P.M. Discussion of Retro-ocular Neuritis. Speakers: Mr. M. Gunn, Dr. Buzzard, Dr. Gowers, Mr. G. A. Berry, Dr. Griffith, and others.

FRIDAY (12th).—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. E. W. Goodall: A Case of Scarlet Fever in which Death was due to Spontaneous Thrombosis of the Veins of Galen.—Dr. A. E. Garrod: A Case of Sclerema Neonatorum.—Mr. C. B. Lockwood: A Case of Peripheral Hyperostosis considered in relation to Pulmonary Hypertrophic Osteo Arthropathy.—Dr. H. D. Rolleston: A Case in which excessive Urobilinuria followed and apparently depended on the Administration of Trional.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (8th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. A. W. Mayo Robson: Diseases of the Gall Bladder and Bile Ducts, and their Surgical Treatment.

LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Mr. G. Stoker: Chronic Glandular Diseases of the Nose and Naso-Pharynx.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Prof. A. Bostock Hill: Factories, Workshops, and Offensive Trades.

TUESDAY (9th).—LONDON POST-GRADUATE COURSE.—Bethlem Hospital, 2 P.M., Dr. Craig: Delusional Insanity, Paranoia.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Abraham: Lichen Planus and Accuminatus.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL.—4 P.M. Dr. D. Grant: The Diagnosis and Treatment of Aural Vertigo.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Horsley: Lecture.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM (73, Welbeck-street).—4 P.M. Dr. T. Dixon Savill: On Cases of Muscular Tremor.

ROYAL INSTITUTION.—3 P.M. Prof. A. D. Waller: Animal Electricity.

WEDNESDAY (10th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. A. W. Mayo Robson: Diseases of the Gall Bladder and Bile Ducts, and their Surgical Treatment.

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4 30 P.M., Prof. A. Wynter Blyth: Sources of Water.

HOSPITAL FOR CONSUMPTION, &C., (Brompton).—4 P.M. Dr. Habershon: Pathological Demonstration.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3.30 P.M. Mr. W. G. Lacy (conducted by): Inspection and Demonstration of Disinfecting Apparatus and Model Steam Laundry at St. John's Wharf, Fulham. 8 P.M. Mr. B. Latham: Indian Sanitation.

SOCIETY OF ARTS.—8 P.M. Mr. F. Bathurst: The Prevention of Fires Due to the Leakage of Electricity.

THURSDAY (11th).—ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. W. Collingridge: On Quarantine. (Milroy Lecture.)

LONDON POST-GRADUATE COURSE.—Brit. Inst of Preventive Medicine, Gt. Russell-st., W.C., 3 30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: On Sugar and other Reducing Substances found in the Urine of Disease.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. J. Cantlie: Supra-Hepatic Abscess.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—8 P.M. Mr. J. O. Smith: Construction and Arrangements of School Buildings.

ROYAL INSTITUTION.—3 P.M. Prof. P. Gardner: Greek History and Extant Monuments.

SOCIETY OF ARTS.—4.30 P.M. Sir C. A. Elliott: Prevention of Famine in India.

FRIDAY (12th).—ROYAL COLLEGE OF SURGEONS.—5 P.M. Prof. A. W. Mayo Robson: Diseases of the Gall Bladder and Bile Ducts, and their Surgical Treatment.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Tuberculosis and Leprosy.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Mr. Ballance: Lecture.

THE CANCER HOSPITAL (FREE) (Fulham-road, Brompton, S.W.).—4 P.M. Mr. W. H. Elam: Cancer of the Gall Bladder.

ROYAL INSTITUTION.—9 P.M. Prof. A. Smithells: The Source of Light in Flames.

SATURDAY (13th).—ROYAL INSTITUTION.—3 P.M. Right Hon. Lord Rayleigh: Electricity and Electrical Vibrations.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-street, W.).—3 P.M. Inspection and Demonstration at Aylesbury Dairy Co.'s Premises, Bayswater (number limited).

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, March 4th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Feb. 26	30·17	S.W.	52	49	93	60	49	...	Cloudy
" 27	30 30	N.	48	45	75	53	47	...	Fine
" 28	30·25	E.	43	41	74	50	39	0·07	Cloudy
Mar. 1	29·55	S.W.	42	40	90	53	40	0·36	Cloudy
" 2	29·74	W.	40	38	83	50	36	0 39	Hazy
" 3	28 75	S.W.	43	40	55	43	38	0·13	Stormy
" 4	29 49	S.W.	40	38	48	45	37	...	Overcast

During the week marked copies of the following newspapers have been received:—*Glossop Times, Huntly Express, Derbyshire Times, Brighton Gazette, Richmond Herald, Surrey Comet, Hereford Times, Chatham News, Worcester Herald, Kidderminster Shuttle, Salisbury Journal, Herne Bay Argus, Times of India, Pioneer Mail, Worcestershire Advertiser, Newcastle Journal, Cheltenham Mercury, Kentish Express, Liverpool Daily Post, Hastings News, Scotsman, Western Morning News, Rocket, Bedfordshire Mercury, Architect, Rochester Journal, Oban Times, Birmingham Mail, Eastern Morning News, Yorkshire Post, Somerset County Herald, Wolverhampton Chronicle, Builder, Leicester Post, Leeds Mercury, Forfar Herald, Salisbury Journal, Manchester Courier, Australian Register, Sussex Daily News, Leamington News, Bristol Mercury, Portsmouth Times, Oldham Standard, Oswestry Advertiser, Express and Star, Sheffield Telegraph, Richmond Herald, Bristol Times, Gillingham Record, Carlisle Express, Litchfield Mercury, Sanitary Record, Local Government Chronicle, Weekly Free Press and Aberdeen Herald, Mining Journal, Reading Mercury, Educational Times, City Press, Cape Times, Hertfordshire Mercury, Carlisle Patriot, Local Government Journal, Surrey Advertiser, West Middlesex Herald, East Anglian Daily Times, Devon and Exeter Gazette, Pioneer, Public Health, Stroud Journal, &c., &c.*

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index for the second volume of 1896 was given in the issue of Dec. 26th last. The practice of supplying loose copies has been discontinued, the Index having been placed in the centre of the journal, whence it can easily be detached, and placed either at the beginning or at the end of the volume.

VOLUMES AND CASES.

VOLUMES for the second half of the year 1896 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.* (Local bookbinders will charge about 1*s.* for binding the numbers in these cases.)

To be obtained on application to the Manager, accompanied by remittance.

"THE HIPPOCRATIC REVIVAL."

Indian.—The translation referred to in the Annotation under the above heading is that of Dr. Robert Fuchs, whose work is thus entitled: "Hippokrates' sämmtliche Werke ins Deutsch übertragen und ausführlich commentirt von Dr. Rob. Fuchs." (The collective works of Hippocrates translated into German and fully annotated by Dr. R. Fuchs.) It will consist of three volumes octavo, two of which are already published—Vol. I. costing 11 fr. 80 centimes, and Vol. II. 13 fr. 40 centimes. The translation improves upon (though it does not supersede) its predecessor—viz, that of Littré in French, and that of Dr. Francis Adams in English, the former (with revised text), published by Baillière, the latter (without text) by the old Sydenham Society. Even Dr. Fuchs's version will, in turn, have to be revised on the completion of the new recension of the Greek text by Kuhlewein, of which the first volume appeared rather more than a twelvemonth ago in the Bibliotheca Scriptorum Græcorum et Latinorum (Teubner, Leipzig).

M.D.—It is better to choose the school before purchasing particular text-books. All the principal London hospitals provide the necessary facilities for study. Our correspondent is advised to consult our most recent Students' Number (Sept. 5th, 1896), where he will find the scale of fees at the various hospitals and notes upon the most valuable text-books. The best course will be to settle upon the particular school first and then consult the Dean of the School concerning the date at which it will be advisable to enter and the classes that should be attended. Different lecturers prefer different text-books.

"DR. RENTOUL'S EXPENSES FUND."—THIRD LIST.

To the Editors of THE LANCET.

SIRS,—The following list contains all sums to hand up to date. Very little more than half the sum required has been subscribed. If the remaining 6500 or so of Dr. Rentoul's voters will send in a small subscription—even one shilling each—our object will be more than attained.

I am, Sirs, yours faithfully,

Gateshead, Feb. 23rd, 1897. ALFRED COX, M.B. Durh., Hon. Sec.

	£	s.	d.
J. T. Abbott and F. Routch, Tunbridge Wells	0	10	0
A. J. D.	0	2	6
S. Alexander, Bromley, E.	1	1	0
T. M. Allison, Newcastle-on-Tyne	0	10	6
C. A. Anderson and A. A. Watson, Burnley	0	10	6
R. S. Anderson, Spennymoor	0	5	0
W. Aspinall, Haslingden, Lancs...	0	5	0
E. C. Barnes, Hammersmith-road, London ...	0	5	0
W. W. Baxter, Manningtree, Essex	0	5	0
T. Carlyle Beatty, Clacton-on-Sea	0	5	0
T. Benson, Stanley, Durham	1	0	0
H. C. Bevan, Blaina, Mon.	0	5	0
J. H. Blight, Cardiff ...	0	5	0
J. D. Boyd, Tyldesley ...	0	2	6
C. F. Brookhouse, Brockley, S.E.	0	5	0
George Brown, Denby Dale, Huddersfield ...	0	5	0
J. H. Buchanan, Sowerby, Thirsk	0	5	0
W. M. Buxton, Blackpool	0	2	6
C. E. A....	0	2	6
J. Charles and D. A. Dewar, Stanley, Durham	0	10	0
C. K. T.	0	2	6
J. Crocker, Bingley	0	2	6
John Cunnigham, Sunderland	0	10	6
T. Davies, Whittlesey, Peterborough	0	2	6
E. H. Davis, West Hartlepool	0	10	0
A. A. G. Dickey, Colne ...	0	5	0
E. W. Diver, Jarrow ...	0	2	6
J. U. Duff, Whitehaven...	0	5	0
E. E. Dufty, Masborough	0	7	0
W. J. Durant, Gateshead	0	10	6
C. W. Evans, Bakewell ...	0	2	6
M. G. Evans, Caerphilly	0	5	0
F. C. L....	0	5	0
J. B. Fisher, Whitehaven	0	5	0
Thomas Fort, Oldham ...	1	1	0
Alfred Freer, Stourbridge	0	10	0
Thomas Gallacher, Sherburn-hill, Durham ...	0	5	0
W. Galloway, Wrekenton, Gateshead	0	10	0
H. E. Gamlen, Hartlepool	0	10	6
R. B. Garland, Bristol ...	0	2	0
G. G. S. T.	0	5	0
H. J. Gilbert, Gateshead	0	5	0
H. Gough, Barnton, Northwich	0	5	0
A. Green, Gateshead ...	0	10	6
H. Habgooed, Eastbourne	0	5	0
J. G. Hall, Swansea... ...	0	10	0
James Haworth, Filey ...	0	5	0
J. T. Haworth, Filey ...	0	5	0
J. N. Hawtin, Leeds ...	0	5	0
P. Z. Hebert, Berners-street, W....	0	5	0
John Hedley, Middlesboro'	0	10	6
W. A. Hepburn, Coxhoe, Durham	1	1	0
Joseph E. Holden, Preston	0	5	0
Robert Howard, Hyde, Cheshire	0	5	0
H. S., Leeds	0	10	0
A. J. Hubbard, Hemel Hempstead	0	10	6
T. S. F. Hudson, Tipton...	0	10	0
H. O. Hughes, Abergele...	0	10	0
K. Marion Hunter, Heathcote-street, W.C.	0	10	0
D. W. Inglis, Hebburn-on-Tyne	0	2	6
J. B. Isaac, Broadmoor, Crowthorn	0	5	0
J. A. B.	0	5	0
W. H. Jalland, York ...	0	10	0
A. Jolly, Sefton Park, Liverpool...	0	10	0
R. Thomas Jones, Penygarth, Harlech	0	5	0
S. Edwards Jones, Bangor, Isycoed	0	10	6
J. H. Keeling, Sheffield...	2	2	0
J. J. Lace, Frizington ...	0	2	6
H. A. Latimer, Swansea...	0	2	6
R. R. Law, Sidcup	0	2	6
J. Lawrence, Darlington	0	2	6
H. A. Lawton, Poole ...	0	2	6
Henry Longford, Thirsk	0	2	6
Alfred T. Lowe, Boothstown, Manchester... ...	0	5	0
J. B. Lyth, Rotherham ...	0	5	0
J. G. Macaskie, Bamburgh	0	3	0
D. Mackechnie, West Hartlepool	1	1	0
John Macphail, Barnsley	0	5	0
F. Macpherson, Liverpool	1	1	0
G. W. Malins, Rochdale...	1	0	0
Jas. McArdle, Durham ...	0	10	6
G. W. McCoull, Stocksfield-on-Tyne	0	10	0
W. McGeagh, Liverpool...	0	10	0
C. H. Miles, Stentonbury	0	5	0
G. Victor Miller, Stockton-on-Tees	0	5	0
S. Moore, Holbeck, Leeds	0	5	0
Thos. Moreton, Hartford, Cheshire	0	10	6
W. Vincent Morgan, Narberth, Pembroke	0	2	6
T. A. Mulcahy, Portsmouth	0	5	0
J. O'Connor, St. Anne's-on-Sea	0	2	6
E. J. O'Mullane, Nottingham	0	1	0
J. W. Paton, Rockferry ...	0	5	0
J. R. Philpot, Parkstone, Dorset	0	5	0
G. O. Pidcock, Hampstead	1	1	0
J. R. Polson, Worcester...	1	1	0
J. HopePotter, Cullompton	0	5	0
J. M. Pringle, Lambley, Carlisle	0	2	6
Arthur I. Richards, Collyhurst, Manchester ...	0	2	6
J. W. Robey, Hyde	0	5	0
J. W. Roe, Ellesmere ...	1	0	0
J. F. Ronayne, Liverpool	0	10	6
Jos. H. Rowe, Cowling, Keighley	0	10	6
W. H. Rowthorn, Masborough	0	2	6
A. Hall Ryall, Hunslet, Leeds...	0	10	6
W. G. Searth, Woodhouse Hall, Leeds	0	5	0
C. B. Scott, Brighton ...	0	5	0
W. W. Scott, Brighton ...	0	5	0
H. Shelmerdine, Bexleyheath	0	2	6
W. T. Sheppard, Liverpool	0	10	6
H. Smith, Durham... ...	0	5	0
J. Barker Smith, Herne Hill, S.E....	0	2	6
C. E. Solomon, Liverpool	0	10	0
W. H. Spurgin, Newcastle-on-Tyne	0	10	0
J. A. Stewart, Normanton, Yorks	0	5	0
F. E. Lee Strathy, Harborne, Birmingham ...	0	7	6
Alfred Sutcliffe, Burnley	1	1	0
R. Jocelyn Swan, Camberwell New-road, S.W.	0	10	0
J. C. Sykes, Cleckheaton	0	7	6
Lawson Tait, Birmingham	1	1	0
W. A. U. Thomas, Maidenhead...	0	3	0
Alfred Taylor, Bolton ...	0	7	6
C. Bell Taylor, Mapperley Park, Notts	1	1	0
R. H. Taylor, Liverpool...	0	5	0
D. McVeagh, Coventry ...	0	5	0
C. Vokes, Lozells, Birmingham...	0	2	6
H. Walker, Hammersmith-road, London	0	5	0
W. Wallis, Groombridge	0	2	6
W. H.	0	5	0
Widnes Medical Society, per O. H. Edwards ...	1	1	0
Dr. Franklin Williams, Liverpool...	0	10	0
J. P. Wills, Bexhill	0	5	0
Philip Wilmot, King's Lynn...	0	10	0
Alfred J. Wright, Leicester	0	5	0
W. E. Wyllys, Gt. Yarmouth	0	10	6

THE NEW MORALITY.

UPON Feb. 23rd Mr. Millson, the medical officer of health for Newington, made an application for the immediate burial of a child who had died from measles. The child had died on the 5th, and had been lying in the mortuary since the 12th. The parents were too poor to bury the body, and the relieving officer refused to bury the body without an order, because the parents were unmarried and the Guardians considered that to bury the child at the expense of the parish would be to encourage people to live in a state of concubinage. The next Burials Bill might well contain a clause to prevent such idiotic conduct in future.

Hillary-street.—We do not think any useful purpose would be served by publishing the letter. It might provoke correspondence of an acrimonious sort.

Locum T.—The clinical practice of a hospital is generally open to the old students of that hospital. The London Post-Graduate Course might be of service to our correspondent, who should apply for prospectus, &c., to Dr. Fletcher Little, 32, Harley-street, Cavendish-square, W.

JAMES BARRY, M.D., THE FEMALE MEMBER OF THE ARMY MEDICAL STAFF.

To the Editors of THE LANCET.

SIRS,—A few months ago some letters appeared in THE LANCET commenting upon the career of the late Dr. Barry, Inspector-General of Hospitals. I have just finished a charming book, "Fifty Years of my Life," by the Earl of Albemarle, and extract from p. 96, vol. ii., the following note which will no doubt interest some of your readers. Lord Albemarle was at the time returning from the Mauritius to England with his regiment, stopping while *en route* at the Cape, where he was a frequent guest of the then Governor-General, Lord Charles Somerset. He writes:—

> "There was at this time at the Cape a person whose eccentricities attracted universal attention—Dr. James Barry, staff surgeon to the garrison and the Governor's medical adviser. Lord Charles described him to me as the most skilful of physicians and the most wayward of men. He had lately been in professional attendance upon the Governor, who was somewhat fanciful about his health; but the Esculapius, taking umbrage at something said or done, had left his patient to prescribe for himself. I had heard so much of this capricious yet privileged gentleman that I had a great curiosity to see him. I shortly afterwards sat next him at dinner at one of the regimental messes. In this learned Pundit I beheld a beardless lad, apparently of my own age, with an unmistakeably Scotch type of countenance—reddish hair, high cheek-bones. There was a certain effeminacy in his manner which he seemed to be always striving to overcome. His style of conversation was greatly superior to that one usually heard at a mess-table in those days of non-competitive examination.
>
> "A mystery attached to Barry's whole professional career, which extended over more than half a century. While at the Cape he fought a duel, and was considered to be of a most quarrelsome disposition. He was frequently guilty of flagrant breaches of discipline, and on more than one occasion was sent home under arrest, but somehow or other his offences were always condoned at headquarters.
>
> "In Hart's Annual Army List for the year 1865 the name of James Barry, M.D., stands at the head of the list of Inspectors-General of Hospitals. In the July of that same year the *Times* one day announced the death of Dr. Barry, and the next day it was officially reported to the Horse Guards that the doctor was a woman. It is singular that neither the landlady of her lodging nor the black servant who had lived with her for years had the slightest suspicion of her sex. The late Mrs. Ward, daughter of Colonel Tidy, from whom I had these particulars, told me further that she believed the doctor to have been the legitimate granddaughter of a Scotch earl, whose name I do not now give, as I am unable to substantiate the correctness of my friend's surmise, and that the *soi-disant* James Barry adopted the medical profession from attachment to an army surgeon who has not been many years dead."

In later years when he visited Constantinople he met with another member of the same sex who had gone through some curious vicissitudes in the combatant line, Madame la Comtesse de Guilleminot, wife of his Excellency General Count de Guilleminot, Charles X.'s representative at the Porte. Of this lady he writes: "Nor was she, like her husband, any stranger to the battlefield. At the breaking out of the French Revolution she and her sister, les demoiselles Fering, entered Dumouriez' army as privates in a hussar regiment. They shared in most of the French victories at that period. Their gallantry in the field soon obtained for them commissions. The sister of Madame de Guilleminot was killed at the battle of Valmy (1792). One of the sisters—I forget which—received a sword of honour for her conduct in the face of the enemy. In the dignified and graceful deportment of the ambassadress of a Royal Court it was difficult to realise the idea of the young Republican *sabreuse*."—I am, Sirs, yours truly,

ALBERT A. GORE, Surgeon-Major-General.

Calcutta, Jan. 24th, 1897.

THE GENEROSITY OF JOHN ANDREWS, POTATO MERCHANT.

A CORRESPONDENT has sent us the following advertisement from a local paper:—

FREE Medical Attendance and Medicine.—Having succeeded in engaging the services of an eminent and very successful Professional Gentleman, I offer the above to all my customers.—John Andrews, Wholesale and Retail Provision and Potato Merchant, Lincoln-road, Fratton.

John Andrews's "eminent and very successful Professional Gentleman" is, of course, a quack, as no registered practitioner would lend his assistance to such a scheme for the inflation of the potato merchant's business. We ask John Andrews, therefore, how he will feel if his proprietary quack should kill some poor potato purchaser, either directly by administering the wrong remedy, or indirectly by preventing application to a properly informed practitioner. There is nothing in the business of a potato merchant calculated to steel the vendor's heart against human misery. Why, then, should John Andrews desire to inflict upon his customers the miseries that spring from quackery? But, to leave humanitarian questions aside and come to cold commercial reasoning, is John Andrews's departure likely to lead him to wealth? We think not. Personally we should prefer to get our potatoes where the price paid was made up to us in the sterling worth of the tubers. If we were offered more than potatoes for our money we should suspect that the potatoes were not worth the money asked for them, so that something had to be added. We should suspect, in this instance, that the wages of the quack had to come out of the price paid for the potatoes and should seek a market where the vendor's methods led to no suspicion of the excellence of his wares.

R. D. writes:—"Will any of the readers of THE LANCET kindly inform me how Sanguinal is prepared, its chemical composition and dose?"

M.D. asks if any readers of THE LANCET can refer him to literature on the subject of the progress of medicine during the present century?

Ignoramus.—The case is apparently one of molluscum fibrosum.

"ANTISEPTIC MIDWIFERY."

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Feb. 27th, 1897, Dr. Playfair recommends a solution of "Creoline" as an efficient antiseptic for vaginal injections and ablution of the genitals. Before adopting "Creoline" one would like to know something more about its bactericidal and spore-killing properties. If a solution of 1 in 50 carbolic acid is not now recommended by Dr. Playfair as a reliable antiseptic, what strength of the "Creoline" solution would be necessary to fulfil the requirements?—I am, Sirs, yours truly,

Huyton, March 1st, 1897. R. L. WOOD.

To the Editors of THE LANCET.

SIRS,—I fear we have got into a maze over this perchloride of mercury as an antiseptic in midwifery. In THE LANCET of Feb. 20th we find Dr. Clement Godson writing: "Why the sublimate treatment should not be 'universally' adopted in private practice I am at a loss to understand," and in the very next issue of the same paper an equally eminent authority in the person of Dr. Playfair tells us "he should not recommend it as a thoroughly reliable antiseptic." I shall not place myself in the invidious position of the "fool stepping in where angels fear to tread," but will leave to those gentlemen the settlement of the question. I would, however, draw Dr. Playfair's attention to the fact that in quoting from his work of 1886 I gave the above date.

I am, Sirs, yours faithfully,

Ballincollig, March 2nd, 1897. JAMES J. HARDING.

X. Y. Z.—The medical man having been engaged must be paid. His services really begin with the arrangement entered into for attendance, and not with the first medical visit. But if before his medical services are required he should contract any illness, the nature of which would make it reasonably likely that he would not be well enough to fulfil his part of the engagement, the propriety of his resigning the case becomes obvious. The patient, however, should certainly make no arrangement with another medical man without communicating with the medical man engaged and ascertaining if he is able and willing to attend. The merits of the case rest on the special circumstances—the nature of the illness, for example.

PROOFS BEFORE LETTERS.

A MEDICAL man has in his possession two engravings after Gustave Doré's popular pictures "The Dream of Pilate's Wife" and "Moses and Aaron before Pharaoh." Both prints are proofs before letters, duly signed by the artist, and in perfect condition. The original cost was twenty-four guineas, and the owner will refuse no reasonable offer.

R. H.—It is difficult to lay down any general rule in this matter, but a completely malted or cooked food is probably more suitable since free undigested starch is not found in normal or natural infants' food.

A STRANGE CASE OF A FORGED MEDICAL CERTIFICATE.

A MAN, about thirty years of age, went to Llandaff, in Glamorganshire, on Jan. 20th and took lodgings, giving the name of "Jenkins." On Jan. 29th he removed to other lodgings, and on Feb. 8th he was found dead in bed. No papers were discovered in his possession except a certificate, which was as follows: "47, Bessborough-gardens, S.W., Jan. 2nd, 1897.—This is to certify that Mr. Jenkins is suffering from heart disease and may die at any moment.—R. N. Smith." On inquiries being made by the London police Mr. Nitch-Smith stated that the certificate was a forgery. It had apparently been written out or copied by the deceased himself, as it was in the same handwriting as the name "W. Jenkins" borne by the label on his portmanteau. His linen had been originally marked "W. Cross," but the name "W. Jenkins" had lately been written over these words. From this and some other facts the coroner, Mr. Bernard Reece, came to the conclusion that the name of the deceased was probably Cross, and he advised the jury to state in their verdict "that he was an unknown male person, that he was found dead in bed, and that he had died from rupture of the aorta." It was subsequently discovered that the deceased's name was Cross and that he came from York. The post-mortem examination showed that the medical certificate contained a correct diagnosis, but it has not been ascertained how the name of Mr. Nitch-Smith came to be attached to it, neither is it known why the deceased carried it about with him.

Dr. Tucker Wise thanks the numerous correspondents who have been good enough to reply to his inquiry respecting a convalescent home for a lady and her daughter. The ladies are now suited.

Mr. Norman B. Elliot.—The secretaries of the various associations will send their prospectuses. Our correspondent probably refers to a report made by THE LANCET on the relation of the medical profession to many of these associations. This report is published at the office of THE LANCET, price 1*s.*

FALSE COLOURS.

To the Editors of THE LANCET.

SIRS,—My attention has been called to your perfectly unexceptionable reply to a correspondent in THE LANCET of Feb. 27th. You say "the name of H. S. Schultess-Young, M.D., does not appear in the Medical Register." Of course it does not, nor on the roll of the Jockey Club, nor in that of aldermen who have passed the chair. But inasmuch as it might be hastily inferred that I have ever represented myself as an M.D. *tout court* or by any inference upon the Medical Register, allow me to contradict that supposition with great emphasis. Nor do I know of any person who has even by inference so described me. I have the misfortune to differ greatly from the orthodox medical man. Up to a certain point I have gladly undertaken and passed the admirable examinations imposed by the Conjoint Board, but beyond this the principles which I hold with the minority will not allow me to go. At the same time, I respect the opinion of the recognised medical professional world and do not seek to run counter to it. I claim no connexion with the British medical fraternity, but it is with regret. And the fact being as I have stated, you will, I hope, allow me the advantage of so assuring your professional readers, many of whom I am proud to claim as friends.

I am, Sirs, yours truly,

H. S. SCHULTESS-YOUNG, M.A., Balliol College, Oxon., Barrister-at-Law.

Essex-court, Temple, E.C., March 2nd, 1897.

*** We received from a correspondent a printed notice announcing a meeting of the National Anti-vaccination League. This notice gave a list of gentlemen who would support the chairman on the occasion. The last name in that list was "H. S. Schultess-Young, Esq., M.A., M.D.," and we were asked if the description was accurate. Our answer intimated that we believed the National Anti-Vaccination League to have misrepresented Mr. Schultess-Young's professional position and to have introduced that gentleman to the public under false colours, and we are glad to see that it was a correct answer. Mr. Schultess-Young is not a member of the Jockey Club, he tells us. Would he consider it fair of an Anti-Gambling League to announce him as a supporter *and* a member of the Jockey Club?—ED. L.

Phenad writes:—"Can any reader kindly tell me where, in Charcot's works, can be found his writings on Traumatic Neurosis and the Wasting of Muscles connected with that condition?"

M.R.C.S., L.S.A.—If the other medical man declined to meet our correspondent, it seems to us that our correspondent was at liberty to attend the case on his sole responsibility. The affair seems a very small one to cause anything like friction between two gentlemen of the same profession, and it is quite possible that the patient has caused the trouble by not understanding all the amenities.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Communications, Letters, &c., have been received from—

A.—Messrs. Adlard and Son, Lond.; Accrington Cottage Hosp., Hon. Sec. of; Alta Pharmacal Co., St. Louis, U.S.A.; Ancoats Hosp., Manchester, Sec. of; Messrs. Arnold and Sons, Lond.

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I.—*Il Policlinico*, Rome, Editorial Sec. of.

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K.—Mr. J. Kenrick-Jones, Llanrhaiadr; Dr. T. N. Kelynack, Manchester; Messrs. Knoll and Co., Ludwigshafen s/Rhein; Messrs. Krohne and Sesemann, Lond.; Messrs. C. Kinloch and Co., Lond.; Mr. R. C. B. Kerin, Lond.; Colonel Keyser, Lond.

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N.—Nursing Institution, Harlesden, Supt. of; National Hospital for the Paralysed and Epileptic, Lond., Sec.-Director of.

P.—Mr. Y. J. Pentland, Edin.; Parish of St. Mary, Islington, Clerk of; Pen, Lond.; Price's Patent Candle Co., Lond., Managing Director of; Parvus, Lond.; Mr. W. Poppelreuter, Lond.

R.—Mr. J. Robertson, Middle Claydon; Royal College of Physicians of London, Bedell of; Royal Surrey County Hosp., Guildford, Asst. Sec. of; Royal Academy of Medicine in Ireland, Dublin, General Sec. of; Royal South Hants Infirmary, Southampton, Sec. of; Mr. H. A. Roechling, Newcastle.

S.—Mr. E. H. Starling, Lond.; Sanitary Wood Wool Co., Lond.; St. John's Hosp. for Diseases of the Skin, Lond., Sec. of; Messrs. S. Smith and Co., Lond.; Messrs. J. and W. Stewart, Lond.; South Devon and East Cornwall Hosp., Plymouth, Hon. Sec. of; *St. James's Budget*, Lond., Editor of; Dr. J. B. Spence, Burntwood; Messrs. Savory and Moore, Lond.; Mr. A. Saxlehner, Lond.

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Letters, each with enclosure, are also acknowledged from—

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D.—Mr. G. C. Davies, Pontlottyn; Dub., Lond.; Mrs. H. Daphne, Dumfries.

E.—E. H. G., Lond.; Ergon, Lond.

F.—F. A., Attleboro'; Mrs. A. G. Fleming, Partridge Green; Fides, Lond.

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U.—Ultimus, Lond.

V.—Veritas, Lond.

W.—Mr. R. Walker, Aberdeen; Mr. J. F. Walker, Swallowfield; Dr. J. Watt, Billquay; W. F., Lond.; Mr. J. C. Waishe, Horwich; Mr. C. E. Winckworth, Shefford; Dr. T. E. White, St. Just; Mr. A. E. Winser, Lond.

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